



State of New Jersey

CHRIS CHRISTIE
Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Engineering and Construction
Office of Coastal Engineering
1510 Hooper Ave; Suite 140
Toms River, N. J. 08753
Tel. 732-255-0767 Fax 732-255-0774

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

August 18, 2016

NJDEP PROJECT NO. 4265-15
SEAWALL REPAIR AND CONSTRUCTION PROJECT
BOROUGH OF SEA BRIGHT AND BOROUGH OF MONMOUTH BEACH
MONMOUTH COUNTY, NEW JERSEY

ADVERTISEMENT FOR BID

Sealed bid proposals for the Seawall Repair and Construction Project, in the Borough of Sea Bright and Borough of Monmouth Beach, Monmouth County, New Jersey will be received by the Administrator, Office of Coastal Engineering, 1510 Hooper Avenue, Toms River, New Jersey 08753, at 10:00 A.M. prevailing time, Wednesday, September 7, 2016.

Bids shall be delivered to William Dixon, Administrator, Office of Coastal Engineering, in person at the above address or by mail prior to the time scheduled for bid openings. No bids will be accepted after the aforementioned time.

Plans and Specifications may be examined at the above address; however, call (732) 255-0767 before visiting to assure availability. Pre-qualified contractors can obtain bid documents from the Toms River address. Bidders must be pre-qualified with this Office under N.J.S.A. 52:35 et seq. and are required to comply with the Affirmative Action provision as outlined in PL 1975, c. 127, and the regulations established by the Department of Environmental Protection.

No proposals will be considered unless accompanied by Certified Check or Bid Bond in the amount of at least ten percent (10%) of total amount bid and a certified statement from bonding company stating that it will furnish necessary performance and payment bond in the amount of the contract in accordance with Section R.S. 2A:44-143 and 2A:44-147 inclusive, with sureties satisfactory to the State of New Jersey.

Minimum wage rates for this project shall be as specified in the "Prevailing Wage Determination of the New Jersey Department of Labor and Industry" on file with this Department. The attention of bidders is directed to the provisions covering subletting or assigning the contract. The entire work is to be completed within the CONTRACT TIME STATED WITHIN THE BID DOCUMENTS.

The Department of Environmental Protection reserves the right to waive any informality in or to rejecting any or all bids as pursuant to law or in the best interest of the State.

A handwritten signature in blue ink, appearing to read "William Dixon".

William Dixon, Administrator
Office of Coastal Engineering

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENGINEERING AND CONSTRUCTION
1510 HOOPER AVENUE
TOMS RIVER, NEW JERSEY 08753

NOTICE TO BIDDERS
SPECIFICATIONS
AND
PROPOSAL FORM
FOR



SEAWALL REPAIR AND CONSTRUCTION PROJECT
BOROUGH OF SEA BRIGHT AND BOROUGH OF MONMOUTH BEACH,
MONMOUTH COUNTY, NEW JERSEY

OFFICE OF COASTAL ENGINEERING
PROJECT NO. 4265-15

August 18, 2016



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Engineering and Construction
Office of Coastal Engineering
1510 Hooper Ave; Suite 140
Toms River, N. J. 08753
Tel. 732-255-0767 Fax 732-255-0774

CHRIS CHRISTIE
Governor

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Date: August 31, 2016

To: All Interested Bidders

Re: **Addendum # 1**

SEA BRIGHT & MONMOUTH BEACH SEAWALL REPAIR & CONSTR. PROJECT
NJDEP OFFICE OF COASTAL ENGINEERING
PROJECT NUMBER 4265-15

This addendum is being issued to the contract for the advertisement of the Seawall Repair and Construction Project, Borough of Sea Bright and Borough of Monmouth Beach, Monmouth County, New Jersey as advertised on August 18, 2016.

The primary purpose of this Addendum, amongst other revisions, is to clarify that the Project that is the subject of the Department's Request for Proposals will be evaluated both as to the base bid and the demonstrated stone setting experience and qualifications of the Contractor and stone setter(s).

As a result of these substantial changes in the bidding procedure please be advised that the Bid Date for this project **shall be extended to Wednesday, September 21, 2016 at 10:00 AM (prevailing time)**. Except as amended in Addendum No. 1, all other terms and conditions of the Project Plans & Specifications remain the same.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum shall supersede the Specifications and Project Plans and are an essential part of the contract. Please note that a copy of this addendum and a signed copy of the attached "Acknowledgement of Receipt of Changes to Bid Document Form" must accompany your bid submission to be deemed complete. Failure to include this addendum and form in your bid package shall show cause for dismissal of said bid.

This addendum is being initially distributed to all current plan-holders via email with an official hard-copy to be sent via UPS. This addendum includes the following:

1. Cover Page – (2 pgs.)
2. Revised Standard Specifications; Sections 5:02-5:04 – (2 pgs.)
3. Revised Standard Specifications; Section 5:08(B) – (5 pgs.)
4. Revised Project Description; Section 1:02 (Item No.1) – (2 pgs.)
5. Revised Project Description; Section 1:06 – (3 pgs.)

6. Revised Technical Specifications; Section 11:01 (Item No.1) – (5 pgs.)
7. Revised Technical Specifications; Section 11:21 – (2 pgs.)
8. Revised Technical Specifications; Section 11:28 (Item No.1) – (2 pgs.)
9. Revised Proposal – (28 pgs.)
10. Clarifications (Q&A) – (7 pgs.)
11. Acknowledgement of Receipt of Changes to Bid Document Form – (1 pg.)

Please send verification of receipt of the addendum to Robert VonBriel of this office via email to robert.vonbriel@dep.nj.gov. If you fail to receive all fifty-nine (59) pages of this Addendum No. 1, please contact Robert at (732) 255-0767.

Sincerely,



Erick Doyle, Supervising Engineer
Office of Coastal Engineering

STD. SPECIFICATIONS:

3:02

QUALIFICATIONS OF BIDDERS: (Rev. 8/31/16)

The receipt and opening of bids is subject to the proper qualifications of each bidder in accordance with R.S. 52:35, together with all amendments thereto, as well as any qualification requirements outlined in Section 1:06 of the Project Description, as amended herein.

The Contractor's Qualifications Affidavit, which is part of the Proposal Form, shall be executed under oath by each bidder.

In determining the qualifications of a bidder, the Department of Environmental Protection, Office of Coastal Engineering, will consider his record in the performance of any contracts for similar work into which he may have entered with the State of New Jersey, or with any Federal Department or Agency or with other public bodies; it expressly reserves the right to reject the bids of such bidder if such record discloses that such bidder, in its opinion, has not properly performed such contract or has habitually, and without just cause, neglected the payment of bills, or has otherwise disregarded his obligation to sub-contractors, employees, or who has failed to satisfactorily complete a previous contract.

3:03

SUBMITTING BIDS: (Rev. 8/31/16)

Bids received after the time named in the Project Advertisement, or after the revised time/date as amended in subsequent addenda, or in unsealed envelopes will not be considered. Bids and guarantees must be submitted sealed in the bid envelopes furnished with the Proposal Forms. Bids received in other than required bid envelopes may be considered informal by the Department of Environmental Protection, Office of Coastal Engineering. The bid envelope should be marked in the places designated thereon with the name and address of the bidder, the number of the project for which the bid is made, and the date and hour of the opening bids.

All bids must be upon the Proposal Form attached thereto. The Proposal Form shall be submitted with the attached forms and proof of project experience and qualifications as outlined in Section 1:06. Bidders are cautioned not to attach any conditions, limitations, or provisions to the proposals as such conditions, limitations or provisions will render their bid informal and may cause its rejection. The right is reserved to waive any informality or to reject any or all bids as may be deemed best in the interest of the State of New Jersey.

STD. SPECIFICATIONS:

3:03

SUBMITTING BIDS: (Rev. 8/31/16)

No proposal will be considered unless accompanied by Bid Bond or Certified Check made payable to the order of the DEPARTMENT OF ENVIRONMENTAL PROTECTION for at least ten (10%) percent of the amount bid, a certified statement from a Bonding Company acceptable to the State of New Jersey; stating that it will furnish required performance and payment bonds for the Contractor upon the award of the work and the required Qualification Affidavit which is issued as part of the Proposal. The Contractor will be required to execute and deliver a performance surety bond to the Department of Environmental Protection, Office of Engineering and Construction as part of the contract, within ten (10) days after the award of contract. The bond shall be in an amount equal to one hundred (100%) percent of the contract amount, with such sureties as shall be approved by the State of New Jersey, to secure the faithful performance of the contract; to indemnify and save harmless the said State of New Jersey from all proceedings, suits or actions of any name or description; to assure the payment of all persons performing labor and/or furnishing material in connection with the project.

Any change in the plans, specification agreements, or quantities without the consent of the bondsmen, shall in no way vitiate said bond. The bond shall be given in compliance with the requirements of the statutes of the State of New Jersey in respect to bonds of Contractors on public works, Revised Statutes of New Jersey, Sections 2A:44-143 through 147, as amended and supplemented.

3:04

CONTACT AWARD: (Rev. 8/31/16)

The Department of Environmental Protection, Office of Coastal Engineering reserves the right to award a contract under this project within the funds available for the project on the basis of the lowest accepted base bid and demonstrated stone setting experience and qualifications received as determined by the provisions in section 1:00 herein, or to reject any or all bids as it may deem best in the interests of the State of New Jersey. The apparent low bidder must furnish Performance & Payment Bonds in order to receive award. The terms and conditions of bidding and contract award as set forth in these specifications and in section 1:00 of these specifications shall become a part of the contract agreement as though recited and contained therein.

STD. SPECIFICATIONS: THE CONTRACTOR:

(B) OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY

INSURANCE: (Rev. 8/31/16 – to replace 5:08(B) - Insurance)

A. **Policy Requirements.** Procure and maintain insurance until Acceptance. The Department will not consider the Work or any portion as put to its intended use until Acceptance. The Contractor may only obtain insurance from companies that are licensed to provide insurance in the State. Ensure that policies are underwritten by companies with a current A.M. Best rating of A- with a Financial Size Category of VII or better. Before performing construction operations, provide the Project Manager with certificates of insurance and policy declaration pages. The Department's [Insurance Certificate \(Form DC-175\)](#) is the only acceptable form as evidence of insurance. Ensure that insurance policies are endorsed to provide written notice by certified mail to the Department 30 days before changes to and/or cancellation of the policy. Upon request, provide the Project Manager with a certified copy of each policy.

Submit documentation to identify all exclusions and deductible clauses. The limits of liability set forth below do not relieve the Contractor from liability in excess of such coverage. Deductibles for each policy are limited to \$250,000 per occurrence. The Contractor is responsible for the deductible limit of the policy and all exclusions consistent with the risks it assumes under this Contract and as imposed by law.

B. **Types.** At a minimum, provide the following insurances:

1. **Comprehensive General Liability Insurance.** Procure Comprehensive General Liability insurance with a minimum limit of liability in the amount of \$1,000,000 per occurrence as a combined single limit for bodily injury and property damage.

Ensure the coverage for the policy is at least as broad as that provided by the standard basic, unamended, and unendorsed comprehensive general liability coverage forms currently in use in the State. Ensure the policy is endorsed to include:

1. Personal injury.
2. Contractual liability.
3. Premises and operations.
4. Products and completed operations.
5. Independent contractors.
6. Waiver of Subrogation for all claims and suits, including recovery of any applicable deductibles.
7. Severability of Interest/Separation of Insureds.
8. Per project aggregate.

STD. SPECIFICATIONS: THE CONTRACTOR:

(B) OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY

INSURANCE: (Rev. 8/31/16 – to replace 5:08(B) - Insurance)

Ensure the policy is endorsed to delete any exclusions applying to property damage liability arising from:

1. Explosions.
2. Damage to underground utilities.
3. Collapse of foundations

Ensure the policy names the Municipality(s), the State, their officers, employees, and agents as additional insured. On the Insurance Certificate, indicate the cost for providing the policy.

2. **Comprehensive Automobile Liability Insurance.** Procure Comprehensive Automobile Liability insurance to cover owned, non-owned, and hired vehicles with a minimum limit of liability in the amount of \$1,000,000 per occurrence as a combined single limit for bodily injury and property damage. Ensure the policy is endorsed to include a Waiver of Subrogation for all claims and suits, including recovery of any applicable deductibles. Ensure the policy is endorsed to include Severability of Interest/Separation of Insureds clause.
3. **Owner's and Contractor's Protective Liability Insurance.** Procure a separate Owner's and Contractor's Protective Liability Insurance Policy with a minimum limit of liability in the amount of \$4,000,000 per occurrence as a combined single limit for bodily injury and property damage. Ensure the policy is endorsed to include Severability of Interest/Separation of Insureds clause. Ensure the policy names the Municipality(s), the State, their officers, employees, and agents as additional insured. Provide documentation from the insurance company that indicates the cost of the Owner's and Contractor's Protective Liability Insurance Policy. Ensure the policy is endorsed to include per project aggregate.
4. **Workers Compensation and Employer's Liability Insurance.** Procure Workers Compensation Insurance according to the requirements of the laws of this State and include an all-states endorsement to extend coverage to any state that may be interpreted to have legal jurisdiction. Provide Employer's Liability Insurance with the following minimum limits of liability:
 1. \$1,000,000 each accident.
 2. \$1,000,000 Disease each employee.
 3. \$1,000,000 Disease aggregate limit.

STD. SPECIFICATIONS: THE CONTRACTOR:

(B) OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY

INSURANCE: (Rev. 8/31/16 – to replace 5:08(B) - Insurance)

If construction operations requires marine operations, including working from a barge or ship, or unloading material from a barge or ship on a navigable waterway in the United States, ensure the policy is endorsed to include US Longshore and Harbor Workers coverage and Jones Act coverage.

5. **Excess Liability Insurance.** Procure Excess Liability or Umbrella Liability insurance with limits in excess of the underlying policies for Comprehensive General Liability and Comprehensive Automobile Liability with minimum limits of liability of \$10,000,000. Ensure the Excess Liability Insurance policy takes effect (drops down) if the primary coverage is impaired or exhausted. Ensure the excess or umbrella policy has the same terms and conditions as the primary underlying coverage.

6. **Marine Liability Insurance.** If construction operations require the Contractor to use a boat, procure Marine Liability Insurance with a minimum limit of liability in the amount of \$2,000,000 per occurrence. Ensure the policy is endorsed to include:
 1. Personal injury.
 2. Contractual liability.
 3. Waiver of Subrogation for all claims and suits, including recovery of any applicable deductibles.
 4. Per project aggregate.

Ensure the policy names the Municipality(s), the State, their officers, employees, and agents as additional insured.

- C. **Maintenance.** Submit an updated [DC-175, Insurance Certificate](#), to demonstrate continued renewal of insurance. During any period when the required insurance is not in effect, the Project Manager may suspend the Work. The Department may refuse to make payments due under this Contract or any other contracts with the Department until the required insurance coverage is in effect. The Department may use monies withheld to renew the insurance for the periods and amounts referred to above. Alternatively, the Department may default the Contractor and direct the Surety to complete the Project.

STD. SPECIFICATIONS: THE CONTRACTOR:

5:08

(C) POLLUTION LIABILITY INSURANCE: (Added 8/31/16)

Procure Contractor's Pollution Liability insurance for bodily injury and property damage with minimum limits of liability in the amounts of \$5,000,000 per occurrence and \$10,000,000 aggregate. Ensure that the pollution liability insurance meets the policy requirements specified in Section 5:08.(B).A of these specifications.

If the policy is written on an occurrence form, ensure it will remain in effect until Acceptance, and ensure that completed operations coverage is provided for a period of no less than 2 years after Acceptance. If the policy is written on a claims-made basis, ensure an Extended Reporting Provision coverage is maintained for a period of no less than 2 years after Acceptance.

Ensure the policy provides coverage for:

1. Bodily injury and property damage to third parties.
2. Natural resource damages.
3. Environmental cleanup including restoration or replacement costs.
4. Legal defense.
5. Transportation of waste material by or on behalf of the Contractor away from the Project Limits.
6. Disposal liability for pollution conditions on, at, under, or emanating from any disposal site, location or facility used by or on behalf of the Contractor for disposal of waste.
7. Waiver of Subrogation for all claims and suits, including recovery of any applicable deductibles.
8. Severability of Interest/Separation of Insureds.
9. Per project aggregate.

Ensure the policy does not contain any exclusions or limitations for:

1. Liabilities Assumed under an insured contract.
2. Lead, silica, or asbestos.
3. Underground storage tanks.
4. Insured versus insured exclusion that restricts coverage to the State.

Ensure the policy names the Municipality(s), the State, their officers, employees, and agents as additional insured. Provide documentation from the insurance company indicating the coverage, limitation of coverage, term of coverage, and cost of the pollution liability insurance policy.

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5:00 (5)

STD. SPECIFICATIONS: THE CONTRACTOR:

5:08

(D) MEASUREMENT AND PAYMENT: (Added 8/31/16)

All costs associated with OWNER'S AND CONTRACTOR'S PROTECTIVE LIABILITY INSURANCE and POLLUTION LIABILITY INSURANCE shall be included in the pay item "GENERAL WORK".

The Contractor shall provide all other insurance costs at the Contractor's expense.

4265-15

1:00 (1)

PROJECT DESCRIPTION:

1:02

WORK DESCRIPTION:

ITEM NO. 1 – GENERAL WORK: (REV. 8/31/16)

- (A) **General Work:** The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, supplies, facilities, work and expenses required for the execution and completion of the project work as a whole, and not specifically provided for under any other work item.

See Subsection 11:01 for further details and specifications.

- (B) **Police Personnel:** The work under this item is to be bid upon an allowance basis and executed in accordance with the parameters designated by each municipality. This item shall include all labor, materials, supplies, facilities, work and expenses required for the hiring of Police Personnel within the Borough of Sea Bright and Borough of Monmouth Beach to control the flow of traffic for deliveries of materials and supplies or as may be required during construction of this project. All Police Traffic Director fees, including Municipal Administration, Police car fees etc. will be considered a direct expense and the amount requested by the Contractor shall not exceed the amount paid to the municipalities. Excess monies shall not be used by the Contractor for any other purpose. Only the amount paid to Municipality, as supported by the appropriate receipts, shall be reimbursed to the Contractor. Payment for overhead and profit for this item will not be made directly. These costs shall be included in the various other items in the proposal.

The Contractor shall be responsible for coordinating with the Police departments in both Municipalities. All requests for police assistance must first be approved by the Project Manager. Police assistance should only be requested on an as-needed basis and reduced/increased as necessary.

The total allowance for this bid item is \$100,000.

See Subsection 11:01 for further details and specifications.

PROJECT DESCRIPTION:

- (C) **Road Maintenance:** The work under this item is to be bid upon an allowance basis and executed in accordance with the parameters to be designated by the Project Manager on as-needed basis, and shall include all labor, materials, supplies, facilities, work and expenses required for the filling pot of holes or depressions with cold-mixed bituminous concrete material, the repair/replacement of curbs and sidewalks, and the control of excessive road dust by watering, or applying calcium chloride, or by other means satisfactory to the Project Manager, along the haul route and parking lot staging areas within the Borough of Sea Bright and Borough of Monmouth Beach as may be required during construction of this project. Excess monies shall not be used by the Contractor for any other purpose. Payment for overhead and profit for this item will not be made directly. These costs shall be included in the various other items in the proposal.

The total allowance for this bid item is \$20,000.

See Subsection 11:01 for further details and specifications.

PROJECT DESCRIPTION:**DETERMINATION OF LOWEST BID AND CONTRACT AWARD:**

(REV. 8/31/16)

Bids will be compared and awarded on the basis of the total amount of base bid AND the demonstrated stone setting experience and qualifications of the bidder. This is a substantial revision to the original specifications dated 8/18/16. The procedure to determine the lowest bid, approve stone setting experience and qualifications, and award contract as outlined in Addendum #1 issued on 8/31/16 shall supersede the original specifications dated 8/18/16.

A. Base Bid: Base bid shall be inclusive of "if and where" items, for all the work as outlined in the proposal form, including Item Nos. 1A, 1B, 1C, 2, 3, 4.1, 4.2 ("A" Quantity ONLY), 4.3 ("A" Quantity ONLY), 4.4, 4.5, 4.6 ("A" Quantity ONLY), 4.7, 4.8A, 4.8B, 5.1, 5.2 ("A" Quantity ONLY), 5.3A, 5.3B, 6.1, 6.2 ("A" Quantity ONLY), 6.3 ("A" Quantity ONLY), 6.4, 6.5, 6.6 ("A" Quantity ONLY), 6.7A, 6.7B, 6.8A, 6.8B, 6.8C, 6.9, 7.1, 7.2 ("A" Quantity ONLY), 7.3 ("A" Quantity ONLY), 7.4, 7.5, 7.6, 7.7, 7.8A, 7.8B, 7.8C, 7.8D, 7.8E, 7.8F, 7.9, 8.1, 8.2 ("A" Quantity ONLY), 8.3 ("A" Quantity ONLY), 8.4, 8.5, 8.6 ("A" Quantity ONLY), 8.7A, 8.7B, 8.8, 9.1, 9.2 ("A" Quantity ONLY), 9.3 ("A" Quantity ONLY), 9.4, 9.5, 9.6 ("A" Quantity ONLY), 9.7A, 9.7B, 9.8, 10.1A, 10.1B, 10.2, 11.1, 11.2 ("A" Quantity ONLY), 11.3 ("A" Quantity ONLY), 11.4, 11.5, 11.6, 12.1, 13.1, 13.2 ("A" Quantity ONLY), 13.3A, 13.3B, 14.1A, 14.1B, 14.2, 15.1, 15.2 ("A" Quantity ONLY), 15.3 ("A" Quantity ONLY), 15.4, 15.5, 15.6, 15.7, 15.8A, 15.8B, 15.8C, 15.9, 15.10A, 15.10B, 16.1, 16.2 ("A" Quantity ONLY). If the lowest acceptable bid is within the funds available to finance the project, a contract will be awarded for all the work as bid upon pending the review and approval of the stone setter and contractor's experience and abilities to complete the work.

B. Stone Setting Experience and Qualifications: For a bid to be considered responsive at bid opening, the Contractor shall provide proof of project experience involving stone setting for the Contractor and all stone setters involved with the project.

- i. **Contractor:** Contractor shall provide proof of project experience and ability for a minimum of two projects utilizing the construction of either stone groins, jetties, flumes, or seawalls either offshore or immediately adjacent to the body of water (i.e. the beach or inlet) where the project

PROJECT DESCRIPTION:

DETERMINATION OF LOWEST BID AND CONTRACT AWARD:

(REV. 8/31/16)

requirements entailed creation of core boxes or bedding stone layers and placement of cap stones of a 4 to 10 ton range (or larger) in multiple keyed layers to provide a contiguous structure.

The Contractor must provide the name and location of each project as well as a brief synopsis of work along with the contracting agencies and at least one point of contact with knowledge of project and work completed by the Contractor. Should the Office, through its investigation, find the work conducted to be either not meeting the criteria depicted above, or not constructed in a workmanlike manner, the Project Manager, or his representative, reserves the right to request additional points of contact or experience (additional projects) prior to issuing an official decision on the Contractor's experience and ability.

- ii. **Stone Setter(s):** In addition to Contractor experience, the Contractor shall also provide proof that the Contractor will have all stone placement accomplished by one or more qualified stone setters, each having demonstrated experience, to the satisfaction of the Project Manager, in the construction of rubble-mound rock coastal structures as outlined in Section 19:00 "STANDARDS FOR JETTY STONE." The required qualifications and submittals in relation to stone setting experience outlined in this Addendum shall supersede any stone setting qualifications and submittals outlined in Section 19:00 for the receipt of bids. Each qualified stone setter shall have no less than five (5) years and/or three (3) projects experience setting stone of similar stone size and project template scope. At the time of bid, the Contractor shall be required to submit the qualifications of a minimum of one individual to perform the stone setting work. Failure to do so could result in rejection of bid. After the award, the Contractor shall adhere to the specification outlined in Section 19:00 – Subsection 19:03.3 Stonesetter should they require the use of additional crews not identified at time of bid.

The Contractor must provide resumes for each stone setter with the minimum qualifications mentioned above including at least one point of contact for each project with knowledge of project and work completed by the stone setter. Should

PROJECT DESCRIPTION:

DETERMINATION OF LOWEST BID AND CONTRACT AWARD:

(REV. 8/31/16)

the Office, through its investigation, find the work conducted on any of the reference projects to be either not meeting the criteria depicted above, or not constructed in a workmanlike manner, the Project Manager, or his representative, reserves the right to request additional points of contact or experience (additional projects) prior to issuing an official decision on the Stone Setter's experience and ability.

The Office of Coastal Engineering shall announce the apparent low bidder at bid opening and shall take up to seven (7) calendar days to review the initially provided documentation and references for experience and ability. Requests for additional information could delay notice of award, or rejection of bid and subsequent award to the next lowest responsive bidder.

If the apparent low bidder's experience and ability is deemed acceptable in writing by the Office, and the base bid is within the funds available to finance the project, a contract will be awarded. An apparent low bidder who does not have the necessary stone setting experience and qualifications, or a qualified stone setter will not be awarded the contract.

If the total amount of the lowest acceptable bid exceeds the available project funds, the Department reserves the right to reduce the quantity of work so that a total dollar amount produced is within the available funds, and to award a contract on such a reduced basis.

The Department of Environmental Protection, Office of Coastal Engineering reserves the right either to award a contract for all work as bid upon, or to reject any and all bids, as may be deemed in the best interests of the State of New Jersey.

In the event of a discrepancy between a unit price bid and an extended total in the bid proposal, excluding omissions, the unit price shall govern.

In the event of an omitted unit price or extended total for any one line item, the inferred price shall govern.

(A) General Work: The work to be performed under this item is to be bid upon and executed on a lump sum basis, and shall include, but not be limited to the following:

1. All general, overhead, underwater work, materials, supplies, facilities and expenses not specifically provided for under any other item or sub-items and required to complete the project work as a whole.
2. It is the Contractor's responsibility to locate and protect all underground utilities. If underground utilities not shown on the project plans are found by the contractor, he shall notify the manager or his representative immediately and protect said utilities until direction is given regarding the disposition of the said utilities. **It is the contractor's responsibility to locate and protect all underground utilities within project work area and fully comply with New Jersey's Underground Facility Protection Act.** All known existing utility information is indicated on the Plans.
3. All necessary excavation, clearing, de-watering and preparing of the sites for the proposed structure that's not already provided for under any other item or sub-item, including the removal and disposal of all existing structures, jetties, bulkheads, stumps, logs, concrete, rock or hulks which come within the lines of work, or which interfere with the prosecution of the work. This includes the removal, transportation, and stockpiling of the existing steel sheet pile bulkhead at Section #4 as shown on the Project Plans. The removed sheets are to be transported to and stockpiled at the Bayshore Floodgate facility, access road off of Rose Lane in Union Beach, New Jersey, or approved equal at the direction of the Office Administrator.
4. The construction and removal of all roads, runways and trestles; storage and facilities for protection of the work and construction material, and any other temporary structures or appliances necessary for proper execution of the work.
5. The restoration and repair of any dune structures and dune grass disturbed in any way to their condition prior to the contractor's operations. Dune grass shall conform to Section 25:00 "BEACH GRASS." It is the Contractor's responsibility to visit the site prior to the bid date to determine and assess the area(s) that may require restoration and repair during construction.
6. The restoration and repair of all private and public property and improvements disturbed, damaged, moved or changed in

any way to their condition prior to the contractor's operations. This **EXCLUDES** existing timber crossover dismantling and reconstruction, which shall be outlined in separate items.

7. The dismantling of all privately-owned crossover structures that are within the line of work. These crossovers shall be dismantled in sections and preserved to the best of the Contractor's ability. The pieces shall be set aside in a safe location to be determined by the Project Manager. Reassembly will be the responsibility of the owner, and will NOT be required by the Contractor.
8. The removal of all debris, equipment and material created by the contractor's operation, or used by him, from the site of the work.
9. The furnishing of two (2) project signs, as specified in subsection 1:05 and 6:08.
10. Relocating, disconnecting and/or re-routing of the power lines and utility poles which may interfere with the work.
11. The preparation of and implementation of a traffic control, pedestrian through work zone and staging area plan and shall include all furnishing and maintaining of warning signs, signals, barricades, and watchmen, as necessary for the safety and protection of the public, particularly during construction. Also, the work area shall be sufficiently secured during the nighttime hours to prevent against trespassing and possible vandalism.
12. The furnishing and maintaining of a time lapse construction camera at an active work location to be determined by the Project Manager. The camera shall maintain an unobstructed view of the seawall construction alignment and be affixed to a secure structure with sufficient height to prevent damage and theft. The camera shall be a Brinno BCC100 Time Lapse Construction Camera or an approved equal, and include a 32 GB SD Memory Card. The camera and any installed mounting structures and accessories shall be relocated to another active work location as directed by the Project Manager once construction in the original location is complete.
13. All work required under Subsections 11:17 through 11:40.
14. The furnishing and maintaining of a minimum 25 foot wide by 60 foot long project office SOLELY FOR THE FIELD INSPECTOR AND PROJECT MANAGER, at the site of the work, complete with high-speed internet access, wireless router, all-in-one facsimile machine/printer/scanner, one (1) new Panasonic

11:01 **ITEM NO. 1 – GENERAL WORK:** (Rev. 8/31/16)

Toughbook 54 rugged laptop computer or approved equal, complete with minimum 2.4 GHz processor, 16 GB of RAM, 500 GB of storage, anti-glare and anti-reflective screen treatments, Windows Version 7 Pro or newer or approved equal, built-in 4G LTE mobile broadband or approved equal, Microsoft Office 2010 edition or newer or approved equal, Adobe Acrobat Pro XI edition or newer or approved equal, 23" wide computer monitor compatible as external display to the laptop, keyboard, and wireless mouse. The project office shall also include a water cooler, microwave, refrigerator, indoor toilet and all other furnishings and equipment, as further specified in subsection 4:03 of the Standard Specifications. Telephone, Internet and electrical service shall be connected to the trailer via the utility company servicing the area. NO WORK SHALL BEGIN UNTIL THE PROJECT OFFICE IS HABITABLE AND COMPLETE.

15. Attaining all permission, easements and rights of ways for access on to the project area, including access roads to the project site.

(B) Police Personnel: The work under this item is to be bid upon an allowance basis and executed in accordance with the parameters designated by each municipality. This item shall include all labor, materials, supplies, facilities, work and expenses required for the hiring of Police Personnel within the Borough of Sea Bright and Borough of Monmouth Beach to control the flow of traffic for deliveries of materials and supplies or as may be required during construction of this project. All Police Traffic Director fees, including Municipal Administration, Police car fees etc. will be considered a direct expense and the amount requested by the Contractor shall not exceed the amount paid to the municipalities. Excess monies shall not be used by the Contractor for any other purpose. Only the amount paid to Municipality, as supported by the appropriate receipts, shall be reimbursed to the Contractor. Payment for overhead and profit for this item will not be made directly. These costs shall be included in the various other items in the proposal.

The Contractor shall be responsible for coordinating with the Police departments in both Municipalities. All requests for police assistance must first be approved by the Project Manager. Police assistance should only be requested on an as-needed basis and reduced/increased as necessary.

SUBMITALS:

Contractor shall submit all police time sheets, invoices, and pay stubs to the Project Manager for approval.

- (C) Road Maintenance:** The work under this item is to be bid upon an allowance basis and executed in accordance with the parameters to be designated by the Project Manager on as-needed basis, and shall include all labor, materials, supplies, facilities, work and expenses required for the filling pot of holes or depressions with cold-mixed bituminous concrete material, the repair/replacement of curbs and sidewalks, and the control of excessive road dust by watering, or applying calcium chloride, or by other means satisfactory to the Project Manager, along the haul route and parking lot staging areas within the Borough of Sea Bright and Borough of Monmouth Beach as may be required during construction of this project. Excess monies shall not be used by the Contractor for any other purpose. Payment for overhead and profit for this item will not be made directly. These costs shall be included in the various other items in the proposal.

Haul route roads utilized for the performance of the work under the project by the Contractor shall be pre-approved by the Project Manager and shall be regularly maintained by the Contractor in a safe and satisfactory manner for the duration of the project. The permitted haul route for this Project shall be from Route 36 Northbound ONLY, to the Project Site. Road maintenance shall be performed promptly and as directed by the project manager. The NJDOT has issued a Highway Occupancy Permit for a shoulder closing for Section 1 construction activities. The Contractor will be responsible for reconstructing damaged pavement, curb, guardrail, sidewalks and other facilities damaged by the Contractor's Operations at his own cost to the NJDOT's satisfaction.

Damage, if determined to be as a result of the Contractor's negligence, will be the sole responsibility of the Contractor and the Contractor shall repair the damage to NJDOT Standards at no additional cost to the State. The Contractor shall monitor the condition of the haul route and parking lot staging areas within the Borough of Sea Bright and Borough of Monmouth Beach to determine if new damage (if identified) is a result of hauling operations and/or whether the hauling operations exacerbated existing damage. It is the responsibility of the Contractor to document the pre-construction condition of the haul route and parking lot staging areas within the Municipalities with photos and/or video.

4265-15

11:00 (5) TECHNICAL SPECIFICATION:

11:01 ITEM NO. 1 – GENERAL WORK: (Rev. 8/31/16)

MATERIALS, METHODS, AND SUBMITALS:

In accordance with NJDOT Specifications for Road and Bridge Construction, 2007 edition as amended herein.

4265-15

11:00 (1) TECHNICAL SPECIFICATION:

11:21 CONTRACTOR WORK AREA: (Rev. 8/31/16)

The staging areas shall be indicated at the Sea Bright Municipal Parking Lot, Monmouth Beach Bathing Pavilion Parking Lot and as identified on the project plans shall be protected by portable chain link fencing six feet in height.

The working areas shall be limited to 600 feet in length (north to south) that will progress with the construction and be delineated by orange safety fence with proper warning signage. The contractor shall be permitted to close the width of beach necessary to allow excavation, sand and stone stockpiling and maneuvering of equipment to complete the work described within the specifications. The contractor shall make every attempt to maintain north-south travel seaward of his operations for the public's use where the beach width is sufficient for safe travel. Should the contractor feel, in their opinion, that the beach width is not sufficient to provide such access, he must obtain permission from the Project Manager to close the entire beach work area in writing prior to fencing the section.

At no time shall less than 200 feet (north to south) exist between working areas if more than one exists. Every effort must be taken by the Contractor to maintain public access to the beach area through this gap if multiple work areas begin to encroach on one another. The Contractor may only progress the work area the length of seawall that has been deemed complete by the Project Manager. This includes, but not limited to, complete stone work, grout work, backfilling, regrading, and appurtenant work such as crossover construction. Adequate security personnel shall be provided by the Contractor to restrict unauthorized entry into the work area during all times of operation.

The Contractor shall be permitted to haul and temporarily stockpile at an upland location a minimum 50 feet landward of the mean high water line (if existing beach width permits such action) within the fenced construction limits no more than the amount of stone required to reconstruct the seawall for five (5) working days or 3,500 tons, whichever is less, at any given time through the project duration unless otherwise directed by the project engineer or his representative. The stockpiles for each stone type shall not be intermingled and shall be confined to an overall area measuring 100 feet wide by 150 feet long within the 600' long progressing construction area as demarcated by construction fencing. The height of each stockpile shall not exceed eight (8) feet or the height of two (2) armor cap stones stacked atop one another, whichever is less. All stone and other material requiring hauling from the staging area to the work area shall be escorted by contractor personnel in a vehicle with warning lights and shall be limited to no more than ten (10) miles per hour (mph) along the beach.

4265-15

11:00 (2) TECHNICAL SPECIFICATION:

Measurement and Payment:

No separate measurement or payment will be made for the contractor to adhere to the staging and work area requirements and all costs associated therewith shall be included in the lump sum price bid for Item No. 1 - General Work.

4265-15

11:00 (1) TECHNICAL SPECIFICATION:

11:28 PAYMENT:

ITEM NO. 1 - GENERAL WORK: (Rev. 8/31/16)

- (A) **General Work:** The work under this item is to be paid for on a lump sum basis. Estimate of percentage complete for monthly partial payments will be made.

Forty percent (40%) of the lump sum bid shall be paid when mobilization of plant, equipment, facilities and Inspector's trailer is complete and is ready to begin operations.

The remaining sixty percent (60%) will be paid only upon completion of all work under the contract, specifically including the complete and satisfactory clean-up of all areas used for the contractor's operations, such as areas used for access or other operations.

- (B) **Police Personnel:** The work under this item is to be measured and paid for in accordance with the parameters designated by each municipality. This item shall include all labor, materials, supplies, facilities, work and expenses required for the hiring of Police Personnel within the Borough of Sea Bright and Borough of Monmouth Beach to control the flow of traffic for deliveries of materials and supplies or as may be required during construction of this project. All Police Traffic Director fees, including Municipal Administration, Police car fees etc. will be considered a direct expense and the amount requested by the Contractor shall not exceed the amount paid to the municipalities. Excess monies shall not be used by the Contractor for any other purpose. Only the amount paid to Municipality, as supported by the appropriate receipts, shall be reimbursed to the Contractor. Payment for overhead and profit for this item will not be made directly. These costs shall be included in the various other items in the proposal.

- (C) **Road Maintenance:** The work under this item is to be measured and paid for in accordance with the parameters designated by the Project Manager on an as-need basis, and shall include all labor, materials, supplies, facilities, work and expenses required for the filling pot of holes or depressions with cold-mixed bituminous concrete material, the repair/replacement of curbs and sidewalks, and the control of excessive road dust by watering, or applying calcium chloride, or by other means satisfactory to the Project Manager, along the haul route and parking lot staging areas within the Borough of Sea Bright and Borough of Monmouth Beach as may be required during construction of this project. Excess monies shall not be used by the Contractor for any other purpose. Payment for overhead and profit for this item will not be made

4265-15

11:00 (2) TECHNICAL SPECIFICATION:

directly. These costs shall be included in the various other items in the proposal.

PROPOSAL

OFFICE OF COASTAL ENGINEERING
PROJECT NO. 4265-15

SEAWALL REPAIR AND CONSTRUCTION PROJECT
in the Borough of Sea Bright & Borough of Monmouth Beach
Monmouth County, New Jersey

Department of Environmental Protection
Engineering & Construction
Office of Coastal Engineering
1510 Hooper Avenue
Toms River, New Jersey 08753

Contractor Name
(Print or type)

Address

City / State / Zip

Dear Sir or Madam:

In accordance with your advertisement of August 18, 2016 inviting proposals for the Seawall Repair and Construction Project in the Borough of Sea Bright and Borough of Monmouth Beach, Monmouth County, New Jersey and subject to the conditions and requirements thereof, and to the Specifications dated August 18, 2016, both of which are attached hereto and so far as they relate to this proposal are made a part of it, I (or we) will provide all necessary material, equipment, supplies and facilities, and perform all the work called for by the said Specifications, in the manner described therein and in accordance with the requirements of the Manager and the Inspectors under him, for the consideration of the bid specified and outlined as follows:

The bidder, hereby certifies to the best of its knowledge and belief and under penalty of perjury under the laws of the United States and the State of New Jersey, to the following:

I. AFFIRMATIVE ACTION

That an affirmative action program of equal opportunity, in support of P.L. 1945, c 169, the New Jersey "Law Against Discrimination" as supplemented and amended, as well as in accordance with Executive Order No. 11246 promulgated by the President of the United States, September 24, 1965 and Executive Order No. 11625, promulgated by the President of the United States, October 13, 1971, has been adopted by this organization to ensure that applicants are employed, employees are treated without regard to their race, creed, color, national origin, sex or age, and that the selection and utilization of contractors, subcontractors, consultants, materials suppliers and equipment lessors shall be done without regard to their race, creed, color, national origin, sex or age. Said affirmative action program addresses both the internal recruitment, employment and utilization of minorities and the external recruitment policy regarding minority contractors, subcontractors, consultants, materials suppliers and equipment lessors.

II. EQUAL EMPLOYMENT OPPORTUNITY

The performance of previous contracts or subcontracts subject to the Equal Opportunity Clause and the filing of required reports

That if the bidder has participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, all reports due under the applicable filing requirements have been filed with the joint reporting committee, the director of the office of federal contract compliance, a federal government contracting or administering agency, or the former president's committee on equal employment opportunity.

Note: This section (II) is required by the Equal Employment Opportunity regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1)) for federally funded projects, and must be certified to by bidders only in connection with contracts and subcontracts which are subject to the Equal Opportunity Clause. Contracts and subcontracts which are exempt from the Equal Opportunity Clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt). Currently, Standard Form 100 (EEO-1) is for FHWA and FRA funded projects and Standard Forms 100 (EEO-1) and 257 are for UMTA funded projects as required by executive orders or their implementing regulations.

Contractors who have participated in a previous contract or subcontract subject to the executive orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts unless such contractor submits a report covering the delinquent period or such other period specified by the participating federal agency or by the director, office of federal contract compliance, U.S. department of labor.

III. NON-COLLUSION AND WARRANTY CONCERNING SOLICITATION OF THE CONTRACT BY OTHERS

That this proposal has been executed with full authority to do so; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said proposal and in the statements contained in this affidavit in awarding the contract for the said project.

That the bidder warrants that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by the bidder. (N.J.S.A.52:34-15).

IV. CERTIFICATION FOR FEDERAL AID CONTRACTS

That no federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of congress, an officer or employee of congress, or an employee of a member of congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

That if any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of congress, an officer or employee of congress, or an employee of a member of congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit standard form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

That this certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, US code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

That the prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

V. DEBARMENT

That the bidder and principals:

Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal, state, or local governmental entity.

Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, of receiving stolen property.

Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses enumerated in the above paragraph of this certification.

Have not within a three-year period preceding this proposal had one or more public transactions (federal, state or local) terminated for cause or default.

Where the bidder is unable to certify to any of the statement in this certification, the Bidder shall explain below and/or on additional pages if necessary.

The bidder shall submit the attached forms:

- 1. OWNERSHIP DISCLOSURE**
- 2. DISCLOSURE OF INVESTIGATIONS AND ACTIONS INVOLVING BIDDER**
- 3. DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN**
- 4. SOURCE DISCLOSURE CERTIFICATION**
- 5. MCBRIDE PRINCIPLES CERTIFICATION**
- 6. VENDOR CERTIFICATION AND POLITICAL CONTRIBUTION DISCLOSURE**
- 7. TWO YEAR CHAPTER 51/EXECUTIVE ORDER 117 VENDOR CERTIFICATION AND DISCLOSURE OF POLITICAL CONTRIBUTIONS**
- 8. AFFIRMATIVE ACTION SUPPLEMENT**
- 9. STATEMENT OF JOINT VENTURE (IF APPLICABLE)**
- 10. CONTRACTOR'S QUALIFICATION AFFIDAVIT**

BIDDING SCHEDULE

ITEM NO. 1 - GENERAL WORK:

(A) General Work: The completion of all general work as specified in Section 11:01, as shown on the project plans for the lump sum of \$ _____

(B) Police Personnel: The hiring of Police Personnel as specified in Section 11:01, for the allowance of \$ 100,000

(C) Road Maintenance: The completion of Road Maintenance as specified in Section 11:01, for the allowance of \$ 20,000

ITEM NO. 2 – SURVEY:

The completion of all survey work as specified in Section 11:02, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 3 – STRUCTURE MONITORING:

The completion of all structure monitoring as specified in Section 11:03, complete and in place for the lump sum of \$ _____

SECTION #1: SEA BRIGHT; NORTH BEACH SEAWALL REHAB:

ITEM NO. 4.1 – EXCAVATION

The completion of excavation work as specified in Section 11:04, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 4.2 – NEW ARMOR CAP STONE

Placement of Armor Cap Stone,
as specified in Section 11:04, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 27,675 TONS @ a unit price of \$_____ per TON,
or \$_____

"B" QUANTITY: 4,885 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 4.3 – NEW CORE STONE

Placement of Core Stone,
as specified in Section 11:04, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 9,530 TONS @ a unit price of \$_____ per TON,
or \$_____

"B" QUANTITY: 1,060 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 4.4 – NEW MAT STONE

Placement of 3,825 TONS of Mat Stone,
as specified in Section 11:04, complete
and in place and as shown on the project plans,
at a unit price of \$_____ per TON, or \$_____

ITEM NO. 4.5 – FILTER FABRIC

Placement of 31,265 square feet (SF) of Filter
Fabric, as specified in Section 11:04, complete
and in place and as shown on the project plans,
at a unit price of _____ per SF, or \$_____

ITEM NO. 4.6 – REHANDLED ARMOR CAP STONE

Rehandling of Armor Cap Stone,
as specified in Section 11:04, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 9,225 TONS @ a unit price of \$_____ per TON,
or \$_____

"B" QUANTITY: 1,630 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 4.7 – GROIN SEALING

Placement of 250 cubic yards (CY)
of Groin Sealing, as specified in Section 11:04, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$_____

ITEM NO. 4.8 – CONCRETE SPLASH PAD

(A) Concrete Splash Pad Demolition: Removal of
1,865 square yards (SY) of Existing Concrete Splash
Pad, as specified in Section 11:04, complete
and in place and as shown on the project plans,
at a unit price of _____ per SY, or \$_____

(B) Concrete Splash Pad Reconstruction: Placement of
1,865 square yards (SY) of Concrete Splash
Pad, as specified in Section 11:04, complete
and in place and as shown on the project plans,
at a unit price of _____ per SY, or \$_____

SECTION #2: SEA BRIGHT; ANCHORAGE SEAWALL REPAIR (IF AND WHERE DIRECTED):

ITEM NO. 5.1 – EXCAVATION

The completion of excavation work as specified in Section 11:05, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 5.2 – REHANDLED ARMOR CAP STONE

Rehandling of Armor Cap Stone, as specified in Section 11:05, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 3,785 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 570 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 5.3 – GROIN SEALING

(A) Groin Sealing Removal: The completion of Groin Sealing Removal work, as specified in Section 11:05, complete and in place and as shown on the project plans, for the lump sum of \$ _____

(A) New Groin Sealing: Placement of 50 cubic yards (CY) of Groin Sealing, as specified in Section 11:05, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

SECTION #3: SEA BRIGHT; NORTHERN MUNICIPAL LOT SEAWALL REHAB:

ITEM NO. 6.1 – EXCAVATION

The completion of excavation work as specified in Section 11:06, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 6.2 – NEW ARMOR CAP STONE

Placement of Armor Cap Stone, as specified in Section 11:06, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 12,035 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 2,125 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 6.3 – NEW CORE STONE

Placement of Core Stone, as specified in Section 11:06, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 2,070 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 230 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 6.4 – NEW MAT STONE

Placement of 1,665 TONS of Mat Stone,
as specified in Section 11:06, complete
and in place and as shown on the project plans,
at a unit price of _____ per TON, or \$ _____

ITEM NO. 6.5 – FILTER FABRIC

Placement of 16,245 square feet (SF) of Filter
Fabric, as specified in Section 11:06, complete
and in place and as shown on the project plans,
at a unit price of _____ per SF, or \$ _____

ITEM NO. 6.6 – REHANDLED ARMOR CAP STONE

Rehandling of Armor Cap Stone,
as specified in Section 11:06, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 4,010 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 710 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 6.7 – GROIN SEALING

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:06, complete and in place
and as shown on the project plans,
for the lump sum of \$ _____

(B) New Groin Sealing: Placement of
110 cubic yards (CY) of Groin Sealing,
as specified in Section 11:06, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$ _____

ITEM NO. 6.8 – GRAVEL STAGING AREA

(A) Gravel Staging Area: Placement of 3,335 square yards (SY) of Gravel Staging Area, as specified in Section 11:06, complete and in place and as shown on the project plans, at a unit price of _____ per SY, or \$ _____

(B) Concrete Curb: Placement of 575 linear feet (LF) of Concrete Curb, as specified in Section 11:06, complete and in place and as shown on the project plans, at a unit price of _____ per LF, or \$ _____

(C) Concrete Driveway: Placement of 75 square yards (SY) of Concrete Driveway, 6" Thick as specified in Section 11:06, complete and in place and as shown on the project plans, at a unit price of _____ per SY, or \$ _____

ITEM NO. 6.9 - VEHICULAR CROSSOVER CONSTRUCTION:

The completion of vehicular crossover construction work as specified in Section 11:06, complete and in place and as shown on the project plans, for the lump sum of \$ _____

SECTION #4: SEA BRIGHT; SOUTHERN MUNICIPAL LOT GAP SEAWALL CONSTRUCTION:

ITEM NO. 7.1 – EXCAVATION

The completion of excavation work as specified in Section 11:07, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 7.2 – NEW ARMOR CAP STONE

Placement of Armor Cap Stone,
as specified in Section 11:07, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 4,520 TONS @ a unit price of \$_____ per TON,
or \$ _____

"B" QUANTITY: 1,860 TONS @ a unit price of \$_____ per TON,
or \$ _____

ITEM NO. 7.3 – NEW CORE STONE

Placement of Core Stone,
as specified in Section 11:07, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 5,435 TONS @ a unit price of \$_____ per TON,
or \$ _____

"B" QUANTITY: 605 TONS @ a unit price of \$_____ per TON,
or \$ _____

ITEM NO. 7.4 – NEW MAT STONE

Placement of 2,180 TONS of Mat Stone,
as specified in Section 11:07, complete
and in place and as shown on the project plans,
at a unit price of _____ per TON, or \$ _____

ITEM NO. 7.5 – FILTER FABRIC

Placement of 20,000 square feet (SF) of Filter
Fabric, as specified in Section 11:07, complete
and in place and as shown on the project plans,
at a unit price of _____ per SF, or \$ _____

ITEM NO. 7.6 – REHANDLED STOCKPILED STONE

Rehandling of 6,000 TONS of Stockpiled Stone, as specified in Section 11:07, complete and in place and as shown on the project plans, at a unit price of _____ per TON, or \$ _____

ITEM NO. 7.7 – GROIN SEALING

Placement of 70 cubic yards (CY) of Groin Sealing, as specified in Section 11:07, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

ITEM NO. 7.8 –PARKING LOT RECONSTRUCTION

(A) Mill & Overlay: Placement of 875 square yards (SY) of mill and overlay, as specified in Section 11:07, complete and in place and as shown on the project plans, at a unit price of _____ per SY, or \$ _____

(B) Asphalt: Placement of 65 square yards (SY) of asphalt, as specified in Section 11:07, complete and in place and as shown on the project plans, at a unit price of _____ per SY, or \$ _____

(C) Striping: Placement of 675 linear feet (LF) of striping, as specified in Section 11:07, complete and in place and as shown on the project plans, at a unit price of _____ per LF, or \$ _____

(D) Concrete Curb: Placement of 230 linear feet (LF) of concrete vertical curb, as specified in Section 11:07, complete and in place and as shown on the project plans, at a unit price of _____ per LF, or \$ _____

(E) Concrete Sidewalk: Placement of 255 square yards (SY) of concrete sidewalk, as specified in Section 11:07, complete and in place and as shown on the project plans, at a unit price of _____ per SY, or \$ _____

(F) Regulatory and Warning Signs: Placement of 6 square feet (SF) of Regulatory and Warning Signs, as specified in Section 11:07, complete and in place and as shown on the project plans, at a unit price of _____ per SF, or \$ _____

ITEM NO. 7.9 – PAVILION PEDESTRIAN BEACH ACCESS:

The completion of Pavilion pedestrian beach access construction work as specified in Section 11:07, complete and in place and as shown on the project plans, for the lump sum of \$ _____

SECTION #5: SEA BRIGHT; LIFEGUARD BUILDING TO SURF ST - SEAWALL REHAB:

ITEM NO. 8.1 – EXCAVATION

The completion of excavation work as specified in Section 11:08, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 8.2 – NEW ARMOR CAP STONE

Placement of Armor Cap Stone, as specified in Section 11:08, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 8,170 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 1,445 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 8.3 – NEW CORE STONE

Placement of Core Stone, as specified in Section 11:08, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 4,220 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 470 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 8.4 – NEW MAT STONE

Placement of 1,695 TONS of Mat Stone,
as specified in Section 11:08, complete
and in place and as shown on the project plans,
at a unit price of \$ _____ per TON, or \$ _____

ITEM NO. 8.5 – FILTER FABRIC

Placement of 10,290 square feet (SF) of Filter
Fabric, as specified in Section 11:08, complete
and in place and as shown on the project plans,
at a unit price of _____ per SF, or \$ _____

ITEM NO. 8.6 – REHANDLED STONE

Rehandling of Stone, as specified in
Section 11:08, complete and in place and as
shown on the project plans, and distributed as follows:

"A" QUANTITY: 2,725 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 480 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 8.7 – GROIN SEALING

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:08, complete and in place
and as shown on the project plans,
for the lump sum of \$ _____

(B) New Groin Sealing: Placement of
75 cubic yards (CY) of Groin Sealing,
as specified in Section 11:08, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$ _____

ITEM NO. 8.8 – TIMBER BOARDWALK RECONSTRUCTION:

The completion of timber boardwalk reconstruction work as specified in Section 11:08, complete and in place and as shown on the project plans, for the lump sum of \$ _____

SECTION #6: SEA BRIGHT; BOROUGH HALL SEAWALL REHAB:

ITEM NO. 9.1 – EXCAVATION

The completion of excavation work as specified in Section 11:09, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 9.2 – NEW ARMOR CAP STONE

Placement of Armor Cap Stone, as specified in Section 11:09, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 3,580 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 630 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 9.3 – NEW CORE STONE

Placement of Core Stone, as specified in Section 11:09, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 1,850 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 205 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 9.4 – NEW MAT STONE

Placement of 740 TONS of Mat Stone,
as specified in Section 11:09, complete
and in place and as shown on the project plans,
at a unit price of \$ _____ per TON, or \$ _____

ITEM NO. 9.5 – FILTER FABRIC

Placement of 7,580 square feet (SF) of Filter
Fabric, as specified in Section 11:09, complete
and in place and as shown on the project plans,
at a unit price of _____ per SF, or \$ _____

ITEM NO. 9.6 – REHANDLED ARMOR CAP STONE

Rehandling of Armor Cap Stone,
as specified in Section 11:09, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 3,580 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 630 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 9.7 – GROIN SEALING (IF AND WHERE DIRECTED)

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:09, complete and in place
and as shown on the project plans,
for the lump sum of \$ _____

(B) New Groin Sealing: Placement of
85 cubic yards (CY) of Groin Sealing,
as specified in Section 11:09, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$ _____

ITEM NO. 9.8 – PEDESTRIAN CROSSOVER RECONSTRUCTION:

The completion of pedestrian crossover reconstruction work as specified in Section 11:09, complete and in place and as shown on the project plans, for the lump sum of \$ _____

SECTION #7: SEA BRIGHT; DONOVAN'S TO VILLAGE RD SEAWALL REPAIR (IF AND WHERE DIRECTED):

ITEM NO. 10.1 – GROIN SEALING

(A) Groin Sealing Removal: The completion of Groin Sealing Removal work, as specified in Section 11:10, complete and in place and as shown on the project plans, for the lump sum of \$ _____

(C) New Groin Sealing: Placement of 165 cubic yards (CY) of Groin Sealing, as specified in Section 11:10, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

ITEM NO. 10.2 – CONCRETE BAG REPAIRS

Placement of 300 cubic yards (CY) of Concrete Bag Repairs (if and where directed), as specified in Section 11:10, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

SECTION #8: SEA BRIGHT; TRADEWINDS GAP SEAWALL CONSTRUCTION:

ITEM NO. 11.1 – EXCAVATION

The completion of excavation work as specified in Section 11:11, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 11.2 – NEW ARMOR CAP STONE

Placement of Armor Cap Stone,
as specified in Section 11:11, complete
and in place and as shown on the project plans,
and distributed as follows:

“A” QUANTITY: 1,240 TONS @ a unit price of \$_____ per TON,
or \$_____

“B” QUANTITY: 220 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 11.3 – NEW CORE STONE

Placement of Core Stone,
as specified in Section 11:11, complete
and in place and as shown on the project plans,
and distributed as follows:

“A” QUANTITY: 640 TONS @ a unit price of \$_____ per TON,
or \$_____

“B” QUANTITY: 70 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 11.4 – NEW MAT STONE

Placement of 260 TONS of Mat Stone,
as specified in Section 11:11, complete
and in place and as shown on the project plans,
at a unit price of _____ per TON, or \$_____

ITEM NO. 11.5 – FILTER FABRIC

Placement of 2,360 square feet (SF) of Filter
Fabric, as specified in Section 11:11, complete
and in place and as shown on the project plans,
at a unit price of _____ per SF, or \$_____

ITEM NO. 11.6 – GROIN SEALING

Placement of 15 cubic yards (CY)
of Groin Sealing, as specified in Section 11:11, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$ _____

**SECTION #9: MONMOUTH BEACH; NORTH BEACH SPLASH PAD
REPAIR (IF AND WHERE DIRECTED):**

ITEM NO. 12.1 – CONCRETE SPLASH PAD

(A) Concrete Splash Pad Demolition: Removal of
375 square yards (SY) of Existing Concrete Splash
Pad, as specified in Section 11:12, complete
and in place and as shown on the project plans,
at a unit price of _____ per SY, or \$ _____

(B) Concrete Splash Pad Reconstruction: Placement of
375 square yards (SY) of Concrete Splash
Pad, as specified in Section 11:12, complete
and in place and as shown on the project plans,
at a unit price of _____ per SY, or \$ _____

SECTION #10: MONMOUTH BEACH; VISTA CT - SEAWALL REHAB:

ITEM NO. 13.1 – EXCAVATION

The completion of excavation work
as specified in Section 11:13, complete
and in place and as shown on the project plans,
for the lump sum of \$ _____

ITEM NO. 13.2 – REHANDLED ARMOR CAP STONE

Placement of Core Stone,
as specified in Section 11:13, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 3,105 TONS @ a unit price of \$_____ per TON,
or \$ _____

"B" QUANTITY: 550 TONS @ a unit price of \$_____ per TON,
or \$ _____

ITEM NO. 13.3 – GROIN SEALING

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:13, complete and in place
and as shown on the project plans,
for the lump sum of \$ _____

(B) New Groin Sealing: Placement of
20 cubic yards (CY) of Groin Sealing,
as specified in Section 11:13, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$ _____

**SECTION #11: MONMOUTH BEACH; SOUTH OF BATHING PAVILION -
SEAWALL REHAB (IF AND WHERE DIRECTED):**

ITEM NO. 14.1 – GROIN SEALING

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:14, complete and in place
and as shown on the project plans,
for the lump sum of \$ _____

(B) New Groin Sealing: Placement of
135 cubic yards (CY) of Groin Sealing,
as specified in Section 11:14, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$ _____

ITEM NO. 14.2 – CONCRETE BAG REPAIRS

Placement of 310 cubic yards (CY)
of Concrete Bag Repairs (if and where directed),
as specified in Section 11:14, complete
and in place and as shown on the project plans,
at a unit price of \$_____ per CY, or \$_____

SECTION #11A: MONMOUTH BEACH; BATHING PAVILION GAP SEAWALL CONSTRUCTION:

ITEM NO. 15.1 – EXCAVATION

The completion of excavation work
as specified in Section 11:15, complete
and in place and as shown on the project plans,
for the lump sum of \$_____

ITEM NO. 15.2 – NEW ARMOR CAP STONE

Placement of Armor Cap Stone,
as specified in Section 11:15, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 19,550 TONS @ a unit price of \$_____ per TON,
or \$_____

"B" QUANTITY: 3,450 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 15.3 – NEW CORE STONE

Placement of Core Stone,
as specified in Section 11:15, complete
and in place and as shown on the project plans,
and distributed as follows:

“A” QUANTITY: 10,095 TONS @ a unit price of \$_____ per TON,
or \$_____

“B” QUANTITY: 1,125 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 15.4 – NEW MAT STONE

Placement of 4,055 TONS of Mat Stone,
as specified in Section 11:15, complete
and in place and as shown on the project plans,
at a unit price of \$_____ per TON, or \$_____

ITEM NO. 15.5 – FILTER FABRIC

Placement of 41,100 square feet (SF) of Filter
Fabric, as specified in Section 11:15, complete
and in place and as shown on the project plans,
at a unit price of _____ per SF, or \$_____

ITEM NO. 15.6 – GROIN SEALING

Placement of 135 cubic yards (CY)
of Groin Sealing, as specified in Section 11:15, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$_____

ITEM NO. 15.7 - VEHICULAR CROSSOVER CONSTRUCTION:

The completion of vehicular crossover construction
work as specified in Section 11:15, complete
and in place and as shown on the project plans,
for the lump sum of \$_____

ITEM NO. 15.8 – TIMBER STRUCTURES

(A) Pedestrian Crossover Reconstruction:

The completion of Pedestrian Ramp Crossover Reconstruction work, as specified in Section 11:15, complete and in place and as shown on the project plans, for the lump sum of \$ _____

(B) Stairs & ADA Ramp Construction:

The completion of Timber Stairs and ADA Ramp work, as specified in Section 11:15, complete and in place and as shown on the project plans, for the lump sum of \$ _____

(C) Pedestrian Staircase Construction:

The completion of Pedestrian Staircase Construction work, as specified in Section 11:15, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 15.9 – GRAVEL STAGING AREA

Placement of 1,390 square yards (SY) of gravel staging area, as specified in Section 11:15, complete and in place and as shown on the project plans, at a unit price of _____ per SY, or \$ _____

ITEM NO. 15.10 – NFWF LANDSCAPING (IF AND WHERE DIRECTED)

Completion of NFWF Landscaping work as specified in Section 11:15, complete and in place and as shown on the project plans, and distributed as follows:

(A) 3 Gallon Rose Ruqosa: 475 @ a unit price of \$ _____ per UNIT,
or \$ _____

(B) 1 Gallon Rose Ruqosa: 625 @ a unit price of \$ _____ per UNIT,
or \$ _____

**SECTION #12: MONMOUTH BEACH; ADMIRALTY BULKHEAD
REMOVAL:**

ITEM NO. 16.1 – WOODEN BULKHEAD REMOVAL

The completion of wooden bulkhead removal work as specified in Section 11:16, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 16.2 – NEW ARMOR STONE

Placement of Armor Stone, as specified in Section 11:16, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 120 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 20 TONS @ a unit price of \$ _____ per TON,
or \$ _____

TOTAL AMOUNT OF BASE BID \$ _____
(As identified in Project Description Section 1:06. Total amount of base bid shall be the sum of all bid items EXCLUSIVE of "B" quantities.)

TOTAL AMOUNT OF BID \$ _____

AMOUNT OF CERTIFIED CHECK OR BID BOND \$ _____
(Minimum of 10% of total amount of bid)

BIDDER'S CERTIFICATION

The person signing this Proposal (hereinafter "I") hereby certifies that I have the full authority to execute this proposal on behalf of the bidder named on page one of this proposal. In executing this proposal, I hereby declare that the bidder has carefully examined the Advertisement, Specifications, Plans, Proposal and all other contract documents required for the construction of the project named above.

I hereby acknowledge that, as the signatory below, the bidder understands that work under this project will not commence until a contract, executed by the Commissioner of the Department of Environmental Protection, is in possession of the bidder and that this may be as long as 90 days after bids have been received.

By submitting this bid, the bidder certifies and represents that its bid, updated financial statement(s), certifications as to business registration/representative, public works contractor registration/representative, and proposal bond have been signed by an authorized representative of the bidder.

Signature of Contractor

Federal I.D. Number

Print Name of Contractor

Email

Title

Telephone Number

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #1: Clarifications (Q&A) - 8/31/16

1. *The proposal page P-4 section V. states that there is DBE utilization requirements for this project as defined in the attached form, however there is no form attached.*

A. There will be no DBE goals set forth for this project. That language is to be stricken from the proposal page and is reflected in the revised proposal herein.

2. *The insurance specifications are not clear.*

A. The original insurance specifications outlined in Section 5.08(B) of the Standard Specifications are to be replaced with revised Section 5.08(B)-(D), attached herein.

3. *Sheet 64 of 89 says "See Note 16". There are only notes 1-14. Please clarify.*

A. This is an error. "See Note 16" should read "See Note 14."

4. *Page T-54 of the Specs states that the contractor shall hire a qualified individual to conduct a survey for the presence or absence of nesting birds during the nesting season (March 15-August 31), but appears to allow work to continue if certain conditions are met. However, Paragraph 5(a) of section 11:19 on Page T-52, and the two NJDEP letters attached to end of specification, have conflicting language stating that there is a seasonal restriction **on all work, for all work locations, as well as staging of work areas from March 15th through August 31st**. Please clarify if work will be allowed to continue during the nesting season if the conditions described on Page T-54 are met, or if no work will be allowed from March 15th to August 31 as stated in Paragraph 5(a).*

A. Work will be allowed to continue during the nesting season if the conditions described on Page T-54 are met. The "seasonal work restriction on all work, for all work locations, as well as staging of work areas from March 15th through August 31st" as outlined in Paragraph 5(a) of Section 11:19 and the two NJDEP Federal Consistency Determinations simply implies that the Contractor shall adhere to these restrictions (if deemed necessary by USFWS) throughout the project, but only at the location(s) where threatened or endangered birds are present.

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #1: Clarifications (Q&A) - 8/31/16

5. *Technical Spec Section 11:01.15 (Page T-3) requires the contractor to include cost for local police personnel to control traffic flow, etc. We request that an Allowance Item be added to the proposal with a set amount for all bidders to use, to cover potential police officer costs. At bid time, contractors have no idea what the local police will require for traffic control, i.e. how many officers, what locations, etc. An Allowance item to cover potential police cost is the typical method to bid these projects and minimize any risk for contractors and Owner. Otherwise Contractors may include large contingencies in their price which the Owner will pay for in a higher total price.*

A. The Contractor shall be allotted \$100,000 to cover potential police officer costs within the Borough of Sea Bright and Borough of Monmouth Beach for the project duration and shall include, but not be limited to, the hiring of Police Personnel to control the flow of traffic for deliveries of materials and supplies or as may be required during construction of this project.

Please see revised Section 1:02 (Item No. 1), revised Section 11:01 (Item No.1), and revised Proposal, attached herein.

6. *Note 7(e) on Plan Page 3 states that no separate payment will be made for any utility relocations, temporary movement or reinstallation required for the installation of proposed improvements. Typically any required utility conflicts/relocations due to construction of the permanent improvements are identified by the engineer of record during the design phase and identified on the contract drawings. Contractors are not in a position to identify the need for utility relocation at bid time (particularly subsurface utilities). Please delete note 7(e) from Plan Page 3, or clarify that contractors will only be responsible for utility relocations as a result of their construction methods.*

A. Note 7(e) on Plan Page 3 applies only to the utilities (if any) identified on the Project Plans. The Contractor shall only be responsible for utility relocations as a result of their construction methods. However, this shall not relieve the Contractor from calling 811 prior to any digging or excavation to verify the locations of any existing utilities that may not be shown on the Project Plans. The Contractor shall also adhere to High Voltage Proximity Act as well as protect all overhead wires.

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #1: Clarifications (Q&A) - 8/31/16

7. *Paragraph 11:01.16 (Page T-3) states that the contractor shall be responsible for road maintenance related to the haul route, including but not limited to filling pot holes, dust control, etc. In that Rt 36 northbound is the only haul route permitted by the Specs, and is an active roadway, this requirement is excessive and outside of the contractor's control. Please add a fixed allowance item to the proposal for costs related to repairs of the active roadway, or clarify this requirement.*

A. The Contractor shall be allotted \$20,000 to cover potential road maintenance costs within the Borough of Sea Bright and Borough of Monmouth Beach for the project duration and shall include, but not be limited to, the filling of pot holes or depressions with cold-mixed bituminous concrete material, the repair/replacement of curbs and sidewalks, and the control of excessive road dust by watering, or applying calcium chloride, or by other means satisfactory to the Project Manager. Damage if determined to be as a result of the Contractor's negligence, will be the sole responsibility of the Contractor and the Contractor shall repair the damage to NJDOT Standards at no additional cost to the State. The Contractor shall monitor the condition of the haul route and parking lot staging areas within the Borough of Sea Bright and Borough of Monmouth Beach to determine if new damage (if identified) is a result of hauling operations and/or whether the hauling operations exacerbated existing damage. It is the responsibility of the Contractor to document the pre-construction condition of the haul route and parking lot staging areas within the Municipalities with photos and/or video.

Please see revised Section 1:02 (Item No. 1), revised Section 11:01 (Item No.1), and revised Proposal, attached herein.

8. *How is the contractor required to price disposal of existing armor stone if it is not quantified? A Pay item should be incorporated for "Disposal of Rehandled Stone".*

A. No disposal of existing armor stone is required as part of this project. All existing stone is to be rehandled/reutilized in the proposed sections of new and reconstructed seawall and quantified in the various bid items.

9. *The Project Plans show an existing sand dune in Section 3 to be removed and relocated "on site". Where is this area located?*

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #1: Clarifications (Q&A) - 8/31/16

- A. The existing sand dune as identified on page 18 of the project plans is to be removed and stockpiled at a location along the municipal beach area within Sections 3-4. The specific location within this area is still to be determined.**

10. Can prefabricated marine mattresses with filter fabric be used in lieu of laying loose fabric and stone in water?

- A. Utilizing prefabricated marine mattresses in lieu of mat stone would be considered a design change. The Contractor may request a change in design utilizing value engineering after award of contract, which would then be subject to approval by the Project Manager. However, during the bidding phase only the items outlined on the Proposal Sheet shall be considered in bid tabulation.**

In addition to this, the Contractor shall assume all risks associated with formulating bid prices around the assumption of acceptance of ANY value engineering alternate, and shall not be relieved of constructing the project at the unit price bid regardless of its acceptance or denial.

11. Can a certified weigh scale that is on a loader be used to weigh the rehandled stone?

- A. Yes. A certified weigh scale on a loader can be used to weigh the rehandled stone.**

12. In the project description for Vehicular Crossover Construction (Item 6.9 and 15.7), there is a note and quantity of additional jetty stone required in the construction of the seaward ramp. Shouldn't a separate line item for the 3 types of stone be added as bid items?

- A. Separate line items will not be included for the additional jetty stone required to construct the vehicular crossovers in Sea Bright and Monmouth Beach. All labor, materials, rigging, etc. required to construct these two line items will be included in the lump sum costs.**

13. Due to the complexity of the project and size we ask for a two (2) week extension to the bid date of September 7th, 2016.

- A. The original bid date of September 7th, 2016 shall be extended to September 21st, 2016 as mentioned in the cover page of this addendum.**

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #1: Clarifications (Q&A) - 8/31/16

14. *Does this project require all materials to be domestic, i.e. "Made in the USA"?*

A. Yes. This project must comply with N.J.S.A. 52:32-1 and N.J.S.A. 52:33-1, et seq., which prohibits the use by the Contractor or subcontractors of materials produced or manufactured outside of the United States on public work. For steel and iron products incorporated into the Project, the contractor must provide a certification from the manufacturer stating the country where the steel or iron product was melted and manufactured including the application of coatings which protect or enhance the value of the material.

The contractor is to ensure that three (3) copies of the manufacturer's certification are provided with each delivery of steel and iron products. The contractor may retain one (1) copy and submit two (2) copies to the NJDEP-OCE. Certification must include: material Description, quantity of material represented, country of manufacture, and a notarized signature of a person having legal authority to bind the supplier.

15. *Drawing S-11 shows a proposed concrete footing and refers to Drawing SD-12 for detail. SD drawings only go to SD-8. Please clarify.*

A. The note on Sheet S-11, Pile Layout – Staircase #1 that reads: "Proposed Concrete Footing (See detail D-1 on Drawing SD-12)" should be revised to read "Proposed Concrete Footing (See Detail D-1 on Drawing SD-6)".

16. *The steel pipe sleeves for the timber piles are 18" diameter ASTM A252, Grade 2. What is the wall thickness of the pipe sleeves and are they coated?*

A. The steel pipe sleeves do not have a structural purpose. They are intended to "preserve" the pile location while stone is being placed/handled. Therefore, the thickness of the shells shall be sufficiently sized to resist the loads imposed by the contractor's means and methods of construction.

As per NJDOT Specification Section 906.02, steel piles in a marine environment are to be coal tar epoxy-coated. It is advised that since these shells are only a guide for construction that the coating be eliminated.

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #1: Clarifications (Q&A) - 8/31/16

17. There is conflicting language throughout the contract documents regarding the seasonal work restrictions at each work Section location on the project. General Section 1:02, Note 5 states that there are seasonal timing restrictions for each calendar year. This section states that Section 1, 2, 7, 8, 9, 10, 11, and 12 have “No timing restrictions”; Section 3, 4, 5, and 6 “No Construction between May 25 – Sept. 7”; and Section 11A “No Construction between Mar 15 – Sept. 7”. This language conflicts with Technical Specification Section 11:19 which states that the Contractor, “Shall adhere to a seasonal restriction on **ALL work** (emphasis added), for **ALL work locations** (emphasis added), as well as any staging of work areas, from March 15th through August 31st of each calendar year”. Further, the “Federal Consistency Determination” for Sea Bright and for Monmouth Beach included in the Appendix contain the same language as Technical Specification Section 11:19 and conflicts with General Section 1:02, Note 5. Please clarify what the actual work timing restrictions will be for each Section (1 through 12) of the project.

A. See Answer to Question #4. Section 1:02, Note 5 applies to “municipal” seasonal timing restrictions, whereas the Federal Consistency Determinations and Section 11:19 apply to “potential environmental” seasonal timing restrictions if the conditions in Section 11:19 are met. Please see table below.

Municipality	Section	Municipal Seasonal Timing Restrictions	“Potential” Environmental Seasonal Timing Restrictions	
			Environmental Monitoring Required	Likelihood of Work Impact
Sea Bright	1	None	Mar. 15 – Aug. 31	Moderate
	2	None	Mar. 15 – Aug. 31	Low
	3	May 25 – Sept. 7 (No Constr.)	Mar. 15 – Aug. 31	Low
	4	May 25 – Sept. 7 (No Constr.)	Mar. 15 – Aug. 31	Low
	5	May 25 – Sept. 7 (No Constr.)	Mar. 15 – Aug. 31	Low
	6	May 25 – Sept. 7 (No Constr.)	Mar. 15 – Aug. 31	Low
	7	None	Mar. 15 – Aug. 31	Low
	8	None	Mar. 15 – Aug. 31	Low
Monmouth Beach	9	None	Mar. 15 – Aug. 31	Moderate
	10	None	Mar. 15 – Aug. 31	Moderate
	11	None	Mar. 15 – Aug. 31	Moderate
	11A	Mar 15 – Sept. 7 (No Constr.)	Mar. 15 – Aug. 31	Low
	12	None	Mar. 15 – Aug. 31	Low

As stated on page T-54, for Sea Bright, there are two zones managed to promote the protection and recovery of listed species and the enhancement of their habitat: The border of Sandy Hook

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Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #1: Clarifications (Q&A) - 8/31/16

to the northern border of Ship Ahoy Beach Club and the southern border of the Driftwood Cabana Club to Monmouth Beach Borough border.

For Monmouth Beach, there are two zones managed to promote the protection and recovery of listed species and the enhancement of their habitat: the border of the Borough of Sea Bright to the Monmouth Beach Bath and Tennis Club and the southern limit of the Monmouth Beach municipal lot to the City of Long Branch Border.

18. The Notes on the "CSP" sheets typically state that the Limit of Disturbance (and beach restoration limits) reflect the maximum excavation limits utilizing 2:1 sloped excavation. In order to construct the seawall in this manner, the top of the excavated slope will be at the Limit of Disturbance and there will be no room for the Contractor to work outside the excavation. Even when the Contractor installs cofferdam sheets to construct the seawall, there is not ample room outside of the excavation and within the Limits of Disturbance to construct the required seawall sections. Please extend the Limits of Disturbance seaward to allow the Contractor ample room to excavate, install cofferdam sheets, and construct the required seawall sections.

A. The Contractor may operate outside the seaward limit of disturbance as outlined in revised Section 11:21.

19. In regard to the Bid Item for "Groin Sealing", the Technical Specifications typically state that this item is to be "In accordance with Section 20:00 Standards for Groin Sealing". There is no "Section 20:00 Standards for Groin Sealing" included in the Appendix. Please provide "Section 20:00 Standards for Groin Sealing".

A. All groin sealing shall be "in accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein", as stated throughout Section 19:00 of the Technical Specifications.

The Groin Sealing outlined in "Section 20:00-Standards for Groin Sealing" which has been utilized on past OCE projects will NOT be utilized in this project.

ACKNOWLEDGMENT OF RECEIPT OF CHANGES TO BID DOCUMENT FORM

(Name of Local Contracting Unit)

(Name of Construction/Public Works Project)

(Project or Bid Number)

Pursuant to Section 3:05 – Addendum, the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the local unit’s record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number Or Title of Addendum/Revision	How Received (mail, fax, Pick-up, etc.)	Date Received
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

NO ADDENDA WAS RECEIVED

Acknowledgement by Bidder:

Name of Bidder: _____

By Authorized Representative: _____

Signature: _____

Printed Name and Title: _____

Date: _____



State of New Jersey

CHRIS CHRISTIE
Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Engineering and Construction
Division of Coastal Engineering
1510 Hooper Ave; Suite 140
Toms River, N. J. 08753
Tel. 732-255-0767 Fax 732-255-0774

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Date: September 15, 2016

To: All Interested Bidders

Re: **Addendum # 2**

SEA BRIGHT & MONMOUTH BEACH SEAWALL REPAIR & CONSTR. PROJECT
NJDEP DIVISION OF COASTAL ENGINEERING
PROJECT NUMBER 4265-15

This addendum is being issued to the contract for the advertisement of the Seawall Repair and Construction Project, Borough of Sea Bright and Borough of Monmouth Beach, Monmouth County, New Jersey as advertised on August 18, 2016.

The primary purpose of this Addendum, amongst other revisions, is to increase the **Contract Time** of the project to **730 Calendar Days**, as well as address additional questions and concerns submitted by interested parties regarding the plans and specifications for the project. Subsequent answers have been provided to clarify all comments. Please note that no further correspondence regarding project questions from interested parties will be accepted after close of business on Monday, September 19, 2016.

As a result of these changes please be advised that the Bid Date for this project **shall be extended to Wednesday, September 28, 2016 at 10:00 AM (prevailing time)**. Except as amended in Addendum No. 2, all other terms and conditions of the Project Plans, Specifications, and previous addendum(s) remain the same.

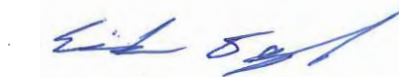
Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum shall supersede the Specifications, Project Plans, and previous addendum(s) and are an essential part of the contract. Please note that a copy of this addendum and a signed copy of the "Acknowledgement of Receipt of Changes to Bid Document Form" received in Addendum No. 1, must accompany your bid submission to be deemed complete. Failure to include this addendum and form in your bid package shall show cause for dismissal of said bid.

This addendum is being initially distributed to all current plan-holders via email with an official hard-copy to be sent via UPS. This addendum includes the following:

1. Cover Page -- (2 pgs.)
2. Revised Project Description; pages Rev. D-1, D-35, & D39 -- (3 pgs.)
3. Revised Technical Specification; page T-61 (1 pg.)
4. Revised Jetty Stone Specification; page 7a, 7b, 15a, 15b -- (4 pgs.)
5. Revised Proposal; pages P-9, P-20, & P-23 -- (3 pgs.)
6. Clarifications (Q&A) -- (7 pgs.)

Please send verification of receipt of the addendum to Robert VonBriel of this office via email to robert.vonbriel@dep.nj.gov. If you fail to receive all twenty (20) pages of this Addendum No. 2, please contact Robert at (732) 255-0767.

Sincerely,

A handwritten signature in blue ink, appearing to read "Erick Doyle", is positioned above the typed name.

Erick Doyle, Supervising Engineer
Division of Coastal Engineering

PROJECT DESCRIPTION:

DETERMINATION OF LOWEST BID AND CONTRACT AWARD:

(REV. 9/14/16)

Bids will be compared and awarded on the basis of the total amount of base bid AND the demonstrated stone setting experience and qualifications of the bidder. This is a substantial revision to the original specifications dated 8/18/16. The procedure to determine the lowest bid, approve stone setting experience and qualifications, and award contract as outlined in Addendum #1 issued on 8/31/16 shall supersede the original specifications dated 8/18/16.

A. Base Bid: Base bid shall be inclusive of "if and where" items, for all the work as outlined in the proposal form, including Item Nos. 1A, 1B, 1C, 2, 3, 4.1, 4.2 ("A" Quantity ONLY), 4.3 ("A" Quantity ONLY), 4.4, 4.5, 4.6 ("A" Quantity ONLY), 4.7, 4.8A, 4.8B, 5.1, 5.2 ("A" Quantity ONLY), 5.3A, 5.3B, 6.1, 6.2 ("A" Quantity ONLY), 6.3 ("A" Quantity ONLY), 6.4, 6.5, 6.6 ("A" Quantity ONLY), 6.7A, 6.7B, 6.8A, 6.8B, 6.8C, 6.9, 7.1, 7.2 ("A" Quantity ONLY), 7.3 ("A" Quantity ONLY), 7.4, 7.5, 7.6, 7.7, 7.8A, 7.8B, 7.8C, 7.8D, 7.8E, 7.8F, 7.9, 8.1, 8.2 ("A" Quantity ONLY), 8.3 ("A" Quantity ONLY), 8.4, 8.5, 8.6 ("A" Quantity ONLY), 8.7A, 8.7B, 8.8, 9.1, 9.2 ("A" Quantity ONLY), 9.3 ("A" Quantity ONLY), 9.4, 9.5, 9.6 ("A" Quantity ONLY), 9.7A, 9.7B, 9.8, 10.1A, 10.1B, 10.2, 11.1, 11.2 ("A" Quantity ONLY), 11.3 ("A" Quantity ONLY), 11.4, 11.5, 11.6, 12.1A, 12.1B, 13.1, 13.2 ("A" Quantity ONLY), 13.3A, 13.3B, 14.1A, 14.1B, 14.2, 15.1, 15.2 ("A" Quantity ONLY), 15.3 ("A" Quantity ONLY), 15.4, 15.5, 15.6, 15.7, 15.8A, 15.8B, 15.8C, 15.9, 15.10A, 15.10B, 16.1, 16.2 ("A" Quantity ONLY). If the lowest acceptable bid is within the funds available to finance the project, a contract will be awarded for all the work as bid upon pending the review and approval of the stone setter and contractor's experience and abilities to complete the work.

B. Stone Setting Experience and Qualifications: For a bid to be considered responsive at bid opening, the Contractor shall provide proof of project experience involving stone setting for the Contractor and all stone setters involved with the project.

- i. **Contractor:** Contractor shall provide proof of project experience and ability for a minimum of two projects utilizing the construction of either stone groins, jetties, flumes, or seawalls either offshore or immediately adjacent to the body of water (i.e. the beach or inlet) where the project

4265-15
1:00 (35)

PROJECT DESCRIPTION:

Rev. 9/14/16

1:03 INVESTIGATION OF SITE AND CONDITIONS:

The Contractor, by the submission of a bid, acknowledges as follows: that he has satisfied himself as to the nature and location of the work; the general and local conditions including but not limited to those bearing on accessibility, transportation, disposal, handling and storage of materials; the availability of labor, water, supplies, materials, power and roads; the uncertainties of weather, tides and similar physical conditions at the sites of the work; the conformation and conditions of the ground, the surface or sub-surface materials, conditions and obstacles; the character of equipment and facilities needed prior to and during prosecution of the work.

Any failure of the contractor to acquaint himself with any and all factors bearing on the project will not relieve him from the responsibility for estimating properly the difficulty and the cost of successfully performing the work, and the responsibility for completing the project under the terms of the contract at the unit or lump sum prices bid in the proposal.

1:04 CONTRACT TIME:

The total allowed contract time is **730** calendar days. In the event of severe weather, which would not allow for work during these days, the contractor will be credited by the inspector against total elapsed work time. See Section 7:00 for further particulars.

NOTES:

- 1. The Contractor shall be fully mobilized and begin work ten (10) calendar days after receiving the Notice to Proceed letter from the Office of Coastal Engineering.**
- 2. The Contractor shall adhere to the following seasonal timing restrictions for each calendar year (NOT inclusive of environmental timing restrictions):**

SEA BRIGHT

- A. Section 1: No timing restrictions.**
- B. Section 2: (If & Where Directed) No timing restrictions.**
- C. Section 3: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.**
- D. Section 4: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.**
- E. Section 5: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.**
- F. Section 6: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.**
- G. Section 7: (If & Where Directed) No timing restrictions.**
- H. Section 8: No timing restrictions.**

4265-15

1:00 (39) PROJECT DESCRIPTION:

1:08 NEW JERSEY PREVAILING WAGE ACT:

Rev. 9/14/16

See section 5:04 herein for detailed requirements of the New Jersey Prevailing Wage Act. A copy of bulletin MW 210 entitled "Prevailing Rate of Wages on Public Contracts", issued by the State of New Jersey, Department of Labor and Industry, will be on file for inspection in the Trenton and Toms River offices of the Office of Coastal Engineering, together with "Prevailing Wage Determination", issued by the Commissioner of the Department of Labor and Industry, and will be attached to the contract for the project.

The following shall be added to Section 5:04:

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, may be obtained from the Davis-Bacon web site at <http://www.access.gpo.gov/davisbacon/nj.html> under the appropriate county where the project is to be performed, select the construction type heading(s): HEAVY & HIGHWAY.

Pay the prevailing wage rates determined by the United States Secretary of Labor and the New Jersey Department of Labor. If the prevailing wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the prevailing wage rate prescribed for that craft by the New Jersey Department of Labor, pay the higher rate.

State wage rates may be obtained from the New Jersey Department of Labor & Workforce Development (Telephone: 609-292-2259) or by accessing the Department of Labor & Workforce Development's web site at http://lwd.dol.state.nj.us/labor/wagehour/wagehour_index.html The State wage rates in effect at the time of award are part of this Contract, pursuant to Chapter 150, Laws of 1963 (N.J.S.A. 34:11-56.25, et seq.).

By submission of bid, the Contractor assures and certifies that it will comply with the minimum-wage and maximum-hour provisions of the Federal Fair Labor Standards Act.

If an employee of the Contractor or subcontractor has been paid a rate of wages less than the prevailing wage, the Department may suspend the Work, and declare the Contractor in default.

1:09 NEW JERSEY SALES AND USE TAX ACT:

See Subsection 5:04(A) herein for Sales Tax Exemption Statement.

1:10 DIVISION OF MOTOR VEHICLES REGULATIONS:

All vehicles used on this project must meet current State regulations for travel on highways. The Contractor must conform to N.J.A.C. 7:27-14 "Diesel Idling Regulations".

D-39

(shall replace D-39 of Project Specifications dated 8/18/16)

be made for one occasion, no matter how many occasions are required to complete the site grading to the satisfaction of the engineer.

11:26 ONSITE MATERIAL:

The material on site is believed to be comparable to the stone specified. No guarantee is given of this, however, and the State of New Jersey, County of Monmouth, or The Borough of Sea Bright will not be responsible if the actual conditions are found to be different. All existing debris, rubble, roots, stumps, logs, rocks, rip-rap, cable or hulks which come within the lines of the work or which interfere with the prosecution of the work shall be removed and disposed of in a manner satisfactory to the engineer, or his appointed representative, by the contractor, and the cost thereof shall be included in his bid for the work.

Bidders are encouraged to visit the site of the work, and to ascertain for themselves the kind of material to be met with and all other local conditions, and it will be assumed that their bids are based upon personal information. No extra allowance will be made for excavation of material different than herein specified, nor will extra allowances be paid should mechanical breakdowns occur due to the above-mentioned obstacles.

11:27 CONTRACT TIME:

The total allowed contract time is **730** calendar days. In the event of severe weather, which would not allow for work during these days, the contractor will be credited by the inspector against total elapsed work time. See Section 7:00 for further particulars.

11:28 PAYMENT:

ITEM NO. 1 - GENERAL WORK:

This item under this item is to be paid for on a lump sum basis. Estimate of percentage complete for monthly partial payments will be made.

Forty percent (40%) of the lump sum bid shall be paid when mobilization of plant, equipment, facilities and Inspector's trailer is complete and is ready to begin operations.

The remaining sixty percent (60%) will be paid only upon completion of all work under the contract, specifically including the complete and satisfactory clean-up of all areas used for the contractor's operations, such as areas used for access or other operations.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

Rev. 9/15/16

19:02.2 QUARRY STONE:

19:02.2b Sampling, Testing and Acceptance of Quarry Stones Con't:

In the event the sample fails to pass the required tests, subsequent tests will be conducted at the Contractor's expense. The Contractor will be notified of the results of all additional laboratory tests. Satisfactory Contractor documentation or laboratory test results on stone samples will not constitute approval of all rock in the quarry and will not in any way change the Contractor's responsibility for obtaining, developing, and maintaining a satisfactory source of stones. Throughout the duration of this contract, the Bureau may sample and test stones delivered to the site and proposed for use in the seawall construction. No contract extension will be granted for specified submittal and testing time or because materials failed to meet the specification requirements. Stones failing to meet specified requirements will be removed from the off-loading facility or construction site at no additional cost to the Bureau. No materials or stones shall be placed in the seawall until those materials or stones have been approved for use. The Contractor shall furnish waybills and delivery tickets for each load of stone delivered to the site. Excessive dust and sand is not permitted and shall not be included in the weighing operation and/or tabulation of truck tickets. The Project Manager reserves the right to adjust payment for each individual load of stone if he, or his representative, determines that excess dust/sand was included in the delivery. Excessive dust/sand shall be considered a depth greater than 1" spread throughout the area of the truck bed.

19:02.2c Quarry Stone Weights:

The Contractor shall have scales at locations where quarry stone is delivered to the project site. The scales shall be certified for accuracy by a properly accredited official. A certified Weigh Master shall operate the scale. Scales shall be re-certified every six months or when they have been moved or if any disturbance may have altered the accuracy. Scales shall have printers that indicate Gross, Tare and Net weights. This ticket shall be signed by the Project Manager or his representative.

In the event that the Contractor proposes to deliver stone to the work location by barge, the Bureau will accept barge weight tickets. The scale at the quarry will be certified by the manufacturer or by the certified Weigh Master. Additional methods for determining the weight of stone may be requested by the Contractor and submitted to the Project Manager for his approval.

19:02.2d Quarry Stone Quality:

Each stone accepted for use in the seawall shall be composed of hard, strong, durable materials that will not slake or deteriorate on exposure to the action of

19:00

STANDARDS FOR JETTY STONE

water or the atmosphere, shall not contain cracks, joints, faults, seams or bands of minerals or deleterious materials which would result in breakage or reduction of specified stone weights or dimensions during or after placement in the seawall, and shall be free of expansive or other materials which would cause accelerated deterioration by exposure to project climatic conditions.

19:00 STANDARDS FOR JETTY STONE

19:03 PART 3 EXECUTION

Rev. 9/15/16

19:03.2 PLACEMENT:

19:03.2a General:

1. Stone shall be placed in a manner to produce a well-graded mass without causing displacement of the underlying material. The finished surface shall be free from pockets of small stones and clusters of large stones. Place stone so as to avoid stretching and subsequent tearing of the mattress and/or filter fabric.
2. The stone shall be delivered and placed in such a manner that will insure that the stone in-place will be reasonably homogenous, with the larger rocks uniformly distributed and firmly interlocked, and the smaller rocks and spalls filling the voids between the larger rock. Construct the Seawall within the specified tolerances of the lines and grades shown on the construction drawings or staked in the field.
3. Provide and set grades at intervals not to exceed 25-foot centers longitudinally and at all points of grade change transversely. A tolerance of plus 2 inches for Core Stone and plus 1 inch for Mat Stone shall be allowed in the finished surfaces from the thicknesses shown on the drawings. Armor Cap Stone tolerance shall be as specified in Section 19:03.5a herein. The intent of these Specifications is to require placement of each layer of the Seawall to the thicknesses shown. No minus tolerance will be permitted for Core and Mat Stone.
4. Place stone in such a manner as to avoid displacing or damaging the mattress and/or filter fabric and to minimize segregation of the stone. Do not operate equipment directly on the mattress or filter fabric. Any mattress or filter fabric damaged beneath the overlying material shall be uncovered as necessary and replaced at no cost to the Owner.
5. The finished stone shall be free from objectionable pockets of small stones and clusters of larger stones. The desired distribution of the various sizes of stones throughout the mass shall be obtained by selective loading of material at the source and/or by controlled placing of successive loads during the final placing. Dumping of stone at the top of slopes and rolling or pushing into place will not be permitted. Rearranging of stones by the use of a "Gradall" or similar piece of mechanical equipment or by hand may be required to obtain a well graded distribution of stone sizes.

19:03.2b Core Layer and Sublayer:

Stone shall be placed by equipment on the surfaces and to the depths

19:00 STANDARDS FOR JETTY STONE

specified. The drop height of the core stone unto the mattress and/or mat stone shall be limited to 2 feet. The stone shall be installed to a full course thickness at a time, in one operation and in such a manner to avoid displacement and/or damage of the underlying mattress and/or filter fabric.

SECTION #2: SEA BRIGHT; ANCHORAGE SEAWALL REPAIR (IF AND WHERE DIRECTED):

ITEM NO. 5.1 – EXCAVATION

The completion of excavation work as specified in Section 11:05, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 5.2 – REHANDLED ARMOR CAP STONE

Rehandling of Armor Cap Stone, as specified in Section 11:05, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 3,785 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 570 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 5.3 – GROIN SEALING

(A) Groin Sealing Removal: The completion of Groin Sealing Removal work, as specified in Section 11:05, complete and in place and as shown on the project plans, for the lump sum of \$ _____

(B) New Groin Sealing: Placement of 50 cubic yards (CY) of Groin Sealing, as specified in Section 11:05, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

ITEM NO. 9.8 – PEDESTRIAN CROSSOVER RECONSTRUCTION:

The completion of pedestrian crossover reconstruction work as specified in Section 11:09, complete and in place and as shown on the project plans, for the lump sum of \$ _____

SECTION #7: SEA BRIGHT; DONOVAN’S TO VILLAGE RD SEAWALL REPAIR (IF AND WHERE DIRECTED):

ITEM NO. 10.1 – GROIN SEALING

(A) Groin Sealing Removal: The completion of Groin Sealing Removal work, as specified in Section 11:10, complete and in place and as shown on the project plans, for the lump sum of \$ _____

(B) New Groin Sealing: Placement of 165 cubic yards (CY) of Groin Sealing, as specified in Section 11:10, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

ITEM NO. 10.2 – CONCRETE BAG REPAIRS

Placement of 300 cubic yards (CY) of Concrete Bag Repairs (if and where directed), as specified in Section 11:10, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

SECTION #8: SEA BRIGHT; TRADEWINDS GAP SEAWALL CONSTRUCTION:

ITEM NO. 11.1 – EXCAVATION

The completion of excavation work as specified in Section 11:11, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 13.2 – REHANDLED ARMOR CAP STONE

Rehandling of Armor Cap Stone,
as specified in Section 11:13, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 3,105 TONS @ a unit price of \$_____ per TON,
or \$_____

"B" QUANTITY: 550 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 13.3 – GROIN SEALING

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:13, complete and in place
and as shown on the project plans,
for the lump sum of..... \$_____

(B) New Groin Sealing: Placement of
20 cubic yards (CY) of Groin Sealing,
as specified in Section 11:13, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$_____

**SECTION #11: MONMOUTH BEACH; SOUTH OF BATHING PAVILION -
SEAWALL REHAB (IF AND WHERE DIRECTED):**

ITEM NO. 14.1 – GROIN SEALING

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:14, complete and in place
and as shown on the project plans,
for the lump sum of..... \$_____

(B) New Groin Sealing: Placement of
135 cubic yards (CY) of Groin Sealing,
as specified in Section 11:14, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$_____

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

Clarification to Section 1:06 – Determination of Lowest Bid and Contract Award,
Sub-Section B. – Stone Setting Experience and Qualifications, i. – Contractor:

The intent of the Stone Setting Experience and Qualifications is to assure the State of New Jersey that the selected Contractor has the necessary skill set/s to coordinate phasing of work, management of stone importation, management of stone stockpiles, installation of stone layers, keying of capstone, and all other aspects to be considered in this type of work. The Contractor may elect to provide proof of experience through a Joint Venture or other means to partner with another firm with the proper experience as a means to ensure said qualifications. The Contractor shall submit the qualification of both firms of the Joint Venture at time of bid for consideration of award.

- 1. Does the alternate pile support detail shown on plan sheet SD-2 also apply for the Ocean Front Pavilion Timber Piles?*

A. The alternate pile support system detail shown on page SD-2 does NOT apply to the "Ocean Front Pavilion Timber Piles".

- 2. Under 11:16 section 6.a for the Seabeach Amaranth, it states that a qualified biologist shall conduct a survey of the project area a max of 1 week before initiation of construction but no earlier than May 1st. Under the letter from the NJDEP dated March 23, 2016 item 6 states that the **PERMITEE** must implement the appropriate survey and monitoring for Seabeach Amaranth. Please clarify if the Contractor or the NJDEP is providing the marine biologist.*

A. The Contractor shall provide the qualified biologist per USFWS recommendations.

- 3. Please confirm that the Contractor is to provide the qualified person to conduct the survey for the piping plover.*

A. The Contractor shall provide the qualified person to conduct the survey for piping plover and all other beach nesting birds per USFWS recommendations.

- 4. The use of wood with CCA for use on public decks and handrails under APWA Standard C18 is prohibited. Under that standard, CCA is allowable for piles and framing, but not the timber in direct contact with people. Please clarify if another wood preservative is to be used for timber decking and handrails only, in lieu of CCA.*

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

A. Refer to Sheets 29 (SN-1) and 60 (SN-2), notes 4-6 under the "TIMBER" heading, specifically #6 which states "...The Contractor shall submit certifications that treatment used is as specified and approved for the use intended."

5. *The Concrete Splash Pad Detail on Sheet 73 of 89 is missing the information regarding the type of rebar or the type of wire mesh to be used. Please provide this information.*

A. For the concrete splash pad the dowel bars are 1" diameter, 18" long. The welded wire fabric should be WWF type 6x6 - w4.0xw4.0.

6. *The drawings and specifications don't clearly address the following issue. There will be excess sand, roughly equivalent to the volume of new stone being placed below grade. We assume the DEP and towns would want that excess sand to stay on the beach for future protection, but it does not clearly state that. Please clarify that the existing excess sand/soil created from the excavation bid items shall remain onsite in the general backfill locations it has been removed from, and it should be graded to generally match the existing beach grades as best as possible? Or should it be stockpiled at a specific location onsite?*

A. The existing excess sand/soil created from the excavation bid items shall remain onsite in the general backfill locations it has been removed from and graded to generally match the existing beach grades to the best of the Contractor's ability. The displaced material arising from the addition of new stone shall be tapered into the existing beach profile with any organic soils, clays, or similar soil strata placed below elevation 0.00 NAVD88, as outlined in Section 32:00 "Excavation".

7. *Bid Item #10.1 (A) is for groin sealing removal Section #7. Typical Section F on drawing #5 does not call for any sealing removal. And the drawings do not give any approximate limits or quantity of groin sealing removal, which is a Lump Sum item. Since this entire Section #7 is an If & Where section, we have no way to correctly price up a Lump Sum item. Please provide more details on this item so we can price it correctly.*

A. The Contractor shall only remove loose/damaged groin sealing as necessary to facilitate installation of new groin sealing if/where directed by the Project Manager. For estimating purposes, assume the same volume of Groin Sealing Removal as New Groin Sealing where applicable.

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

8. *The Contract Duration provides 545 Calendar Days for completion. However, with the restriction of no construction work between May 25 and Sept. 7 in Sea Bright, and March 15 –Sept. 7 for Section 11A in Monmouth Beach, there is insufficient time to perform and complete the construction, even with multiple crews. The Specification requires the contractors to provide proof of the firm’s stone setting experience, and also that of the stone setter. It will be difficult to find multiple people with the required stone setting experience to staff multiple crews. In addition there are very limited sources that can effectively produce the Armor Cap Stone that meets the Specification requirements, and deliver it in sufficient daily quantities, to multiple locations, on a daily basis to allow the schedule and work completion requirements to be met. Therefore, we request that the time duration for completion of work under this contract be increased.*

A. After careful consideration, the Contract Time has been extended to 730 calendar days’ contract duration. The seasonal work timing restrictions, required stone setting qualifications, and stone specification requirements shall remain the same with the additional clarification language included above. The Contractor shall be permitted to submit for an extension of Contract Time as outlined in Section 7:05 – Claim for Delay for such instances as weather delays or other unforeseen circumstances that affect the prosecution of work. Additional considerations for extension of Contract Time may be given due to delays in construction arising from environmental work restrictions as previously outlined within the bid documents.

The Contractor may elect to utilize a sub-Contractor for a portion of the stone-setting work should additional crews be required to complete the work within the prescribed Contract Time. The Contractor may elect to utilize a sub-Contractor for a portion of the stone-setting work should additional crews be required to complete the work within the prescribed Contract Time. The Contractor shall adhere to the specification outlined in Section 19:00 – Subsection 19:03.3 by producing the individual/s credentials for approval as a stone setter prior to the start of work for said stone setter/sub-Contractor.

All inherent risks associated with these requirements shall be accounted for within the bid price for each work item.

9. *We request a further extension of the Bid Date, due to the nature of the work and certain materials required that involve preliminary engineering and design to obtain pricing, from suppliers and subcontractors.*

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

- A. The Bid Date for this project shall be extended to Wednesday, September 28, 2016 at 10:00 AM (prevailing time), as outlined in the Cover Letter of this addendum.**

10. There are many details on GPE-3 and S drawings that show an 18" diam steel sleeve for the timber piles. It is clear these sleeves are to be placed in the new stone prior to placing stone to reserve a void to later drive the piles through. Many of these pile locations are in areas where the new stone is placed on top of existing stone seawall, and the details do not show that scenario. The new sleeve will assist getting the pile through the new stone, but the timber pile will stop as soon as it hits existing stone. In these cases where piles are in areas of existing stone does pile capacity or minimum tip not matter, and just stop pile at existing stone? Or should all of those details of supports in locations of existing stone really be changed to some sort of concrete footing?

- A. In areas where the existing sea wall is to remain the Pedestal Pile Support detail shall be utilized.**

11. Paragraph iii on Page D-5 of the Project Description states that all costs for the sorting, handling, and placing of the choke stone shall be incorporated into the unit price for New Core Stone. We assume that this means the choke stone will be measured and paid for payment under the various core stone items, but it will not be measured under its own separate bid item. Please confirm.

- A. Yes. As mentioned on page D-5 and D-6, only small pieces of Core and Mat stone that meet the specifications for Choke Stone shall be incorporated into the seawall as Choke Stone. As such, in preparing bid prices it should be assumed that choke stone is already accounted for in the bid quantities for Core and Mat Stone items. Choke stone will be measured and paid for under the various Core Stone and Mat Stone items, and will not be measured under its own separate bid item.**

12. Spec Section 19:01.3 states that the Department will adjust the compensation to the contractor if the contractor elects to supply stone that is denser than as specified in Table 1. Please explain what method the Department will use to determine the density of the individual stones (boulders) that are to be incorporated into the project.

- A. The stone density will be determined by the stone density certification provided by the supplier, subsequently The Project Manager will periodically determine the average density of several small samples of each stone type using the Water Displacement Method (i.e. by weighing the sample and dividing the weight by**

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

the volume of water displaced when placing the sample in a graduated cylinder).

13. *Spec Section 316219 (3.2) states that high-strain dynamic monitoring shall be performed and reported during initial driving and during restriking on 3 percent of piles. Please confirm that the dynamic monitoring will only need to be performed during the initial drive of test piles (not production piles) and that restrikes will only need to be performed on 3 percent of the production piles.*

A. The high-strain dynamic monitoring will only be required during the initial drive of test piles and restrikes will only need to be performed on 3 percent of the production piles.

14. *Please clarify the width of the vehicle crossover ramp east of the seawall on plan sheet 61. The callout states the ramp is to be 16' wide however the detail "typical cross over ramp on rock states the width is 18'-3".*

A. The ramp is to be 16'-0" wide. The detail is to be the same as the detail on sheet 31.

15. *Please clarify if placing of the existing stone stockpile will be measured and paid for upon incorporation into the proposed seawall, or if it considered incidental to one of the bid items*

A. Placing of the existing stone stockpile will be measured and paid for upon incorporation into the proposed seawall.

16. *On Plan Sheet 30, "T-Wall Elevation" shows a 1' Coarse Aggregate Layer. Please clarify if this Coarse Aggregate layer should extend the entire width of the Common Structure Volume area or if it is only required beneath the footing.*

A. The Coarse Aggregate Layer is required under the footing for the "T-Wall" and the "tails".

17. *Section #1 & #9 have a large quantity of splash pad removal and reconstruction. Please provide detail of the existing pad, and new splash pad construction. For example, concrete thickness, rebar, etc..*

A. Section 1 – Based on the 1989 Construction Plans (not As-built), the existing splash pad in Section 1 appears to be comprised of:
-2" Bituminous Concrete Surface Course, Mix I-5,
-6" Bituminous Stabilized Base Course, Mix I-5,
-6" Soil Aggregate Base Course, Mix I-7,
-6" Soil Aggregate Base Course, Mix I-7.

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Section 9 – No Construction or as-built plans available. Other sections of seawall built around same era show 6" thick concrete with #4 bars, 12" on center both directions.

The information above regarding the construction of the existing splash pad (sections 1 and 9) has not been verified and is provided for information only.

The detail for new splash pad construction at both sections is shown on sheet 73.

18. *Items # 6.7 (A), 8.7 (A), 9.7(A), 10.1 (A), and 14.1 (A) area II "Groin Sealing Removal" items however the plan sheets do not show a limit for the removals. Please clarify the exact limits of removal in order to accurately calculate the lump sum unit price.*

A. See answer to Question #7.

19. *Please clarify if the stringers / joists at the proposed pavilion are to be 2 x 10 or 2 x 12. The structural plans call them out to be J1 Joists, according to the material list on S.101.1 J1 Joists are to be 2 x 12. On the architectural plans A.202 and A.204 show the stringers as 2 x 10.*

A. The joists are to be 2 x 12 as on the Structural Drawing (S.101).

20. *The Structural Drawings and Architectural Drawings show different requirements for the cross bracing at timber piles. On plan sheet A.202 cross bracing is shown in the "Ramp 1 - Part Framing Plan" section at all four pile locations. On structural drawing S.101 no cross bracing is shown at these locations. Please revise and clarify which detail is correct.*

A. Detail "2/A.202" on page Sheet A.202 matches Detail "6/S.200" on sheet S.200 that referenced on Sheet S.101.

21. *On Plan Sheet 31, "Reinforcement on Rock" detail, there are dowels shown coming out of the concrete slab into the seawall. Please clarify what spacing these dowels will be required at and the bar size required.*

A. The Dowels shall be 5-#5 bars equally spaced at 2'-0" on center along the length of the seawall with a minimum embedment of 8".

22. *Structural Note 2 found on sheets 30 and 61 of the contract plans states "All areas of embedded tails shall be grouted with Class "B" concrete". Is it the intention of this note to require the backfill material between the T-Wall stems (tails) be Class "B" concrete? The only other reference on the plans to*

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the required backfill between the stems (tails) is Note 2 in the Typical T-Wall Section located on sheet 31, which refers us to the NJDOT Standard Specifications for permissible backfill. Likewise, the only reference in the contract technical specifications is to the NJDOT Standard Specifications. Please clarify the intention of the referenced Structural Note 2 and confirm the backfill requirements for the area within the T-Wall stems.

A. Reference shall be made to Note 3 on Sheets 30 and 61. Sheets 31 and 62 clarify the placement of the seawall stonework and grouting. Reference is made to T-Wall/Sea Wall Tie-In Plan. The remaining backfill shall be placed in accordance with NJDOT standards as per T-Wall Typical Section.

23. How many bird monitors should the firm expect to use at one time?

A. For the purposes of bidding, the firms should expect to use one monitor should it be necessary due to the results of the bird survey.

24. Can the bird monitors get permission to allow the use of an ATV?

A. Yes, permission can be obtained to use an ATV in an approved manner.



State of New Jersey

CHRIS CHRISTIE
Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Engineering and Construction
Division of Coastal Engineering
1510 Hooper Ave; Suite 140
Toms River, N. J. 08753
Tel. 732-255-0767 Fax 732-255-0774

BOB MARTIN
Commissioner

KIM GUADAGNO
Lt. Governor

Date: September 21, 2016

To: All Interested Bidders

Re: **Clarification # 1**
SEA BRIGHT & MONMOUTH BEACH SEAWALL REPAIR & CONSTR. PROJECT
NJDEP DIVISION OF COASTAL ENGINEERING
PROJECT NUMBER 4265-15

This clarification is being issued to the contract for the advertisement of the Seawall Repair and Construction Project, Borough of Sea Bright and Borough of Monmouth Beach, Monmouth County, New Jersey as advertised on August 18, 2016.

The following clarification statements are to resolve potential redundancies in the weighing of stone and certification of truck net weights:

- 1. A scale at the project staging area/stone receiving location is NOT required as an additional means of weighing new stone and that the weight tickets as provided by certified Weigh Master at the stone supplier shall suffice.**
- 2. The Contractor shall obtain a certification statement from the stone supplier that the any excess sand intentionally placed in the truck beds to prevent damage is NOT included in the Net Weight listed on the weight ticket. The Project Manager reserves the right to direct the Contractor to verify the weight of a sample of stone deliveries should he believe a discrepancy exists between the weight ticket and actual quantity delivered.**

The Bid Date for this project **shall remain Wednesday, September 28, 2016 at 10:00 AM (prevailing time)**. Except as amended in Clarification No. 1, all other terms and conditions of the Project Plans, Specifications, and previous addendums remain the same.

Submit bids for this work with the understanding and full consideration of this clarification. The revisions declared in this clarification shall supersede the Specifications, Project Plans, and previous addendums and are an essential part of the contract. Please note that a copy of this clarification, previous addendums, and a signed copy of the "Acknowledgement of Receipt of Changes to Bid Document Form" received in Addendum No. 1, must accompany your bid submission to be

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENGINEERING AND CONSTRUCTION
1510 HOOPER AVENUE
TOMS RIVER, NEW JERSEY 08753

SEAWALL REPAIR AND CONSTRUCTION PROJECT

BOROUGH OF SEA BRIGHT AND BOROUGH OF MONMOUTH BEACH,
MONMOUTH COUNTY, NEW JERSEY

OFFICE OF COASTAL ENGINEERING
PROJECT NO. 4265-15

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* If & Where Directed (Full).

** If & Where Directed (Partial ONLY).

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1:00 (1)

PROJECT DESCRIPTION:

1:01

LOCATION:

The proposed Seawall Repair and Construction Project and related work to be performed under this project is located on the East side of Ocean Avenue in the Borough of Sea Bright and Borough of Monmouth Beach, Monmouth County, New Jersey. Specific details as to the location are shown on the project plans.

1:02

WORK DESCRIPTION:

The work to be performed under these specifications consists of the furnishing of all construction materials, equipment, labor, supplies and facilities, and the performing of all work necessary to construct three (3) new sections of stone seawall (Sea Bright Municipal Parking Lot Gap, Sea Bright Tradewinds Gap, and Monmouth Beach Bathing Pavilion Gap), and repair and reconstruct various components of the existing stone seawall for the remaining ten (10) sections identified and related work per project description, together with all appurtenant work, as required by and in conformance with these Specifications and Project Plans on eighty-nine (89) sheets, dated August 2016 and identified as E-36-26.

NOTES:

- 1. Due to the complexity of the project and highly dynamic and historical high erosive rate of the beach area, it is strongly recommended that the prospective bidders visit the project area to review the proposed work and work site prior to the bid date. Should the contractor decide not to visit the site, this will not relieve him of performing the job for the work item and total price bid.**
- 2. The Contractor shall have a maximum of five (5) calendar days from the receipt of notification of low bid from the Office to return to the Office of Coastal Engineering all completed forms, executed bonds, and signed and notarized necessary paperwork for the contract in its entirety. Failure to do so could result in the Contractor's disqualification of their bid.**
- 3. The Contractor shall be fully mobilized and begin work ten (10) calendar days after receiving the Notice to Proceed letter from the Office of Coastal Engineering.**
- 4. In addition to the staging areas identified on the Project Plans, the Contractor shall contain all construction operations and stone stockpiles within rolling work areas as the project progresses, in accordance with Section 19:01.5 of the Jetty Stone Specifications.**

PROJECT DESCRIPTION:

5. The Contractor shall adhere to the following *seasonal* timing restrictions for each calendar year (NOT inclusive of environmental timing restrictions. Please see Section 11:19 of the Technical Specifications for information regarding *environmental* timing restrictions.):

SEA BRIGHT

- A. Section 1: No timing restrictions.
- B. Section 2: (If & Where Directed) No timing restrictions.
- C. Section 3: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.
- D. Section 4: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.
- E. Section 5: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.
- F. Section 6: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.
- G. Section 7: (If & Where Directed) No timing restrictions.
- H. Section 8: No timing restrictions.

MONMOUTH BEACH

- I. Section 9: (If & Where Directed) No timing restrictions.
- J. Section 10: No timing restrictions.
- K. Section 11: (If & Where Directed) No timing restrictions.
- L. Section 11A: NO CONSTRUCTION BETWEEN MAR 15 – SEPT. 7.
- M. Section 12: No timing restrictions.

6. Due to the compressed timeframe of the work required, multiple crews may be utilized to complete tasks simultaneously at the Contractor's discretion. The Contractor shall prioritize the completion of Sections 3-6 regardless of whether or not multiple crews are utilized.
7. If it is anticipated that these items will not be complete by the start of the timing restriction, the Contractor must demobilize all plant and equipment and clear the beachfront areas entirely in these locations, including all unused stone before the timing restriction begins, unless otherwise directed by the Project Manager. The Contractor shall then remobilize after the timing restriction has ended and complete the work at NO ADDITIONAL COST to the State of New Jersey for any change in site conditions, fuel/material increases, remobilization, etc.
8. For each day that the work continues, plant and equipment remains mobilized, and/or beachfront remain unclear from May 25th to September 7th for Sections 3 through 6 in Sea Bright and Section 11A in Monmouth Beach, the Department of Environmental Protection, may withhold from the Contractor's total compensation for the work the sum of ten-thousand (\$10,000.00) dollars, and the amount thus withheld shall not be considered as a penalty but as liquidated damages fixed

PROJECT DESCRIPTION:

and agreed to in advance by contracting parties because of the potential ramifications to beach revenue and the difficulty of fixing exact damages, as a proper compensation to the municipalities for the loss, inconvenience, and expense caused by such delay.

9. Sections 2, 7, 9, and 11 shall only be constructed if and where directed by the Manager.
10. The Contractor shall coordinate all transportation, staging, and construction operations with other projects in the area, including the construction of the Sea Bright Beach Pavilion building, improvements to the rear deck of the Monmouth Beach Bathing Pavilion, and various road improvement projects that could potentially commence within the timeframe of this project.
11. The Contractor shall adhere to all federal/state environmental work limit and timing restrictions throughout construction, in accordance with Section 11:19 of the Technical Specifications.
12. All inherent risks associated with the phasing of the overall construction shall be accounted for within the bid price for each work item.
13. The Office of Coastal Engineering reserves the right to modify the template and stone layer thicknesses as may be in the best interest of the State of New Jersey. The maximum excavation depth permitted shall be elevation -10.0 NAVD88. The bid price for each work item shall account for this variability. Contractor shall be paid for actual installed quantities.
14. No material under the "B" quantities shall be utilized for the stone work items unless written authorization is issued to the Contractor from the Manager.
15. Any reference to New Jersey Department of Transportation (NJDOT) specifications shall apply ONLY to the Technical Specifications of this project. NJDOT specifications shall not govern the Standard Specifications of this project unless otherwise noted herein.
16. At no time shall more than 150 LF of existing seawall be deconstructed. In the event of an impending storm event the Contractor shall fill/reconstruct the opening prior to the predicted storm event with stockpiled stone to match the

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1:00 (4)

PROJECT DESCRIPTION:

interlock of the adjacent seawall which existed prior to deconstruction.

PROJECT DESCRIPTION:

Identical work items between different sections of the project are described in items i thru viii.B below, and referenced herein. Work items that relate to the project as a whole and site-specific work items are described under that particular work item:

i. EXCAVATION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required to excavate, temporarily stockpile at an upland, onsite location, and permanent placement of the sand upon completion and acceptance of a section of the seawall by the Manager, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ii. NEW ARMOR CAPSTONE:

The work under this item is to be bid upon and executed at a unit price per ton of new Armor Capstone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Armor Capstone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

iii. NEW CORE STONE:

The work under this item is to be bid upon and executed at a unit price per ton of new Core Stone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Core Stone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item shall also include all labor, materials, equipment, rigging, tools, and accessories required to incorporate small pieces of Core Stone into the Armor Cap Stone layer to utilize as choke stone in order to facilitate the installation of Groin Sealing as needed. These small pieces of Core Stone shall conform to the choke stone specification outlined in Section 19:02.3a of the Jetty Stone Specifications. All costs associated with sorting, handling, and placing the choke stone shall be incorporated into the Contractor's unit price for this particular bid item.

PROJECT DESCRIPTION:

iv. NEW MAT STONE:

The work under this item is to be bid upon and executed at a unit price per ton of new Mat Stone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Mat Stone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item shall also include all labor, materials, equipment, rigging, tools, and accessories required to incorporate pieces of Mat Stone into the Armor Cap Stone layer to utilize as choke stone in order to facilitate the installation of Groin Sealing as needed. These pieces of Mat Stone shall conform to the choke stone specification outlined in Section 19:02.3a of the Jetty Stone Specifications. All costs associated with sorting, handling, and placing the choke stone shall be incorporated into the Contractor's unit price for this particular bid item.

v. FILTER FABRIC:

The work under this item is to be bid upon and executed at a unit price per square foot of new Filter Fabric, and shall include all labor, materials, equipment, rigging, tools, and accessories required to install the filter fabric, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

vi. REHANDLED ARMOR CAP STONE:

The work under this item is to be bid upon and executed at a unit price per ton of Rehandled Armor Cap Stone, and shall include all labor, materials, equipment, rigging, tools, and accessories required to excavate, extract, clean, sort, inspect, temporarily stockpile at an upland, onsite location, and permanently place the stone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

PROJECT DESCRIPTION:

vii. **GROIN SEALING:**

- (A) **Groin Sealing Removal:** The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to remove the existing grout necessary to facilitate the rehandling of the existing armor cap stone and/or installation of new groin sealing to the depths required, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (B) **New Groin Sealing:** The work under this item is to be bid upon and executed at a unit price per cubic yard, and shall include all labor, equipment, rigging, tools, and accessories required to seal the crest and/or landward face of the constructed seawall with a layer of cementitious-type mixture to the penetration depths required, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

viii. **CONCRETE SPLASH PAD:**

- (A) **Concrete Splash Pad Demolition:** The work under this item is to be bid upon and executed at a unit price per square yard, and shall include all labor, materials, equipment, rigging, tools, and accessories required to demolish and remove any damaged portions of the existing concrete splash pad throughout the section as directed by the Project Manager, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (B) **Concrete Splash Pad Reconstruction:** The work under this item is to be bid upon and executed at a unit price per square yard, and shall include all labor, materials, equipment, rigging, tools, sub-base preparation, compaction, rebar, and accessories required to reconstruct the damaged portions of concrete splash pad throughout the section as directed by the Project Manager, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

PROJECT DESCRIPTION:

The work under this project is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 1 - GENERAL WORK:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, supplies, facilities, work and expenses required for the execution and completion of the project work as a whole, and not specifically provided for under any other work item.

See Subsection 11:01 for further details and specifications.

ITEM NO. 2 – SURVEYS:

The work to be performed under this item is to be bid upon and executed on a lump sum basis and shall include all labor, materials, equipment, rigging, tools and accessories required for conducting separate mark-out surveys, as-built surveys, and periodic grade/elevation verification of the project area. Mark-out and as-built surveys shall be prepared by a surveyor licensed in the State of New Jersey as specified in Section 11.02.

ITEM NO. 3 – STRUCTURE MONITORING:

The work specified in this section is to be bid upon and executed on a lump sum basis and shall include all labor, materials and equipment, and performing all operations required to monitor structures for potential effects of the contract work.

See Subsection 11:03 of the Technical Specifications for further detail.

SECTION #1: SEA BRIGHT; NORTH BEACH SEAWALL REHAB:

The work under this section includes the reconstruction of approximately 1,189 linear feet of stone seawall which includes, but is not limited to: Adding additional stone to raise the elevation of the wall to +18.0 NAVD88, adding a seaward toe if one does not already exist, rehandling of the existing stone, grouting the top and landward face of the reconstructed wall, reconstructing the concrete splash pad on the landward side of the seawall if damaged during construction, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

PROJECT DESCRIPTION:

ITEM NO. 4.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:04 for further details and specifications.

ITEM NO. 4.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

The total estimated "A" quantity for this bid item is 27,675 tons. The total estimated "B" quantity for this bid item is 4,885 tons.

The total estimated quantity for this bid item is 32,560 tons.

See Subsection 11:04 for further details and specifications.

ITEM NO. 4.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

The total estimated "A" quantity for this bid item is 9,530 tons. The total estimated "B" quantity for this bid item is 1,060 tons.

The total estimated quantity for this bid item is 10,590 tons.

See Subsection 11:04 for further details and specifications.

ITEM NO. 4.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

The total estimated quantity for this bid item is 3,825 tons.

See Subsection 11:04 for further details and specifications.

ITEM NO. 4.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

The total estimated quantity for this bid item is 31,265 square feet.

See Subsection 11:04 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 4.6 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

The total estimated "A" quantity for this bid item is 9,225 tons. The total estimated "B" quantity for this bid item is 1,630 tons.

The total estimated quantity for this bid item is 10,855 tons.

See Subsection 11:04 for further details and specifications.

ITEM NO. 4.7 – GROIN SEALING:

In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 250 cubic yards of groin sealing.

See Subsection 11:04 for further details and specifications.

ITEM NO. 4.8 – CONCRETE SPLASH PAD:

(A) Concrete Splash Pad Demolition: In accordance with Section 1:02.viii.A of the Project Description.

The total estimated quantity for this bid item is 1,865 square yards.

See Subsection 11:04 for further details and specifications.

(B) Concrete Splash Pad Reconstruction: In accordance with Section 1:02.viii.B of the Project Description.

The total estimated quantity for this bid item is 1,865 square yards.

See Subsection 11:04 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #2: SEA BRIGHT; ANCHORAGE SEAWALL REPAIR
(IF AND WHERE DIRECTED):

The work under this section includes the repair of approximately 273 linear feet of stone seawall which includes, but is not limited to: Rehandling and resetting of the existing cap stone along the crest and seaward face of the wall, and grout work to seal the crest and landward face of the wall where deemed necessary by the Project Manager, as well as other appurtenant items necessary to complete the work.

Note: All work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 5.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:05 for further details and specifications.

ITEM NO. 5.2 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

The total estimated "A" quantity for this bid item is 3,785 tons. The total estimated "B" quantity for this bid item is 570 tons.

The total estimated quantity for this bid item is 4,355 tons.

See Subsection 11:05 for further details and specifications.

ITEM NO. 5.3 – GROIN SEALING:

- (A) Groin Sealing Removal:** In accordance with Section 1:02.vii.A of the Project Description.

See Subsection 11:05 for further details and specifications.

- (B) New Groin Sealing:** In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 50 cubic yards of groin sealing.

See Subsection 11:05 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #3: SEA BRIGHT; NORTHERN MUNICIPAL LOT SEAWALL REHAB:

The work under this section includes the reconstruction of approximately 517 linear feet of stone seawall and the construction of various appurtenant items which includes, but is not limited to: Adding additional stone to raise the elevation of the wall to +18.0 NAVD88, adding a seaward toe if one does not already exist, rehandling of the existing stone, grouting the top and landward face of the reconstructed wall, constructing a vehicular crossover structure up and over the reconstructed wall, converting the contractor staging area to a gravel parking lot post-construction, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 6.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:06 for further details and specifications.

ITEM NO. 6.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

The total estimated "A" quantity for this bid item is 12,035 tons. The total estimated "B" quantity for this bid item is 2,125 tons.

The total estimated quantity for this bid item is 14,160 tons.

See Subsection 11:06 for further details and specifications.

ITEM NO. 6.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

The total estimated "A" quantity for this bid item is 2,070 tons. The total estimated "B" quantity for this bid item is 230 tons.

The total estimated quantity for this bid item is 2,300 tons.

See Subsection 11:06 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 6.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

The total estimated quantity for this bid item is 1,665 tons.

See Subsection 11:06 for further details and specifications.

ITEM NO. 6.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

The total estimated quantity for this bid item is 16,245 square feet.

See Subsection 11:06 for further details and specifications.

ITEM NO. 6.6 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

The total estimated "A" quantity for this bid item is 4,010 tons. The total estimated "B" quantity for this bid item is 710 tons.

The total estimated quantity for this bid item is 4,720 tons.

See Subsection 11:06 for further details and specifications.

ITEM NO. 6.7 – GROIN SEALING:

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

See Subsection 11:06 for further details and specifications.

(B) New Groin Sealing: In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 110 cubic yards of groin sealing.

See Subsection 11:06 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 6.8 – GRAVEL STAGING AREA

- (A) **Gravel Staging Area:** The work under this item is to be bid upon and executed at a unit price per square yard of installed Gravel Staging Area, and shall include all labor, equipment, rigging, tools, and accessories required to excavate, grade, and construct the gravel staging area within Section 3, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 3,335 square yards.

See Subsection 11:06 for further details and specifications.

- (B) **Concrete Curb:** The work under this item is to be bid upon and executed at a unit price per linear foot of installed concrete curb, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete vertical curb within Section 3 which will surround the future gravel parking area, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 575 linear feet of concrete curb.

See Subsection 11:06 for further details and specifications.

- (C) **Concrete Driveway, 6" Thick:** The work under this item is to be bid upon and executed at a unit price per square yard of installed concrete driveway, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete driveways within Section 3 complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 75 square yards of concrete driveway.

See Subsection 11:06 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 6.9 – VEHICULAR CROSSOVER CONSTRUCTION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to construct the vehicular crossover structure within Section 3, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, Precast Concrete Retaining Wall (landward side), the additional excavation, filter fabric, and jetty stone necessary to construct the seaward ramp, 8" Thick Concrete Surface Course, Steel Backed Timber Guiderail, Backfill, and all other items necessary for construction.

Note: The following tonnages of additional jetty stone necessary to construct the seaward ramp shall be assumed for estimating purposes.

1. Armor Cap Stone – 2,690 tons
2. Core Stone – 4,635 tons
3. Mat Stone – 635 tons

See Subsection 11:06 for further details and specifications.

SECTION #4: SEA BRIGHT; SOUTHERN MUNICIPAL LOT GAP SEAWALL CONSTRUCTION:

The work under this section includes the construction of approximately 339 linear feet of new stone seawall and the construction of various appurtenant items which includes, but is not limited to: Constructing a new stone seawall to bridge the gap in the existing stone seawall between the River Street entrance and the south end of the Municipal Lot, grouting the top and landward face of the new seawall, incorporating the existing stockpiled stone located at the north end of the Municipal Lot into the seawall where the Contractor sees fit, constructing pedestrian crossover staircases and ADA ramps up and over the new seawall, various parking lot reconstruction work including the construction of a new concrete sidewalk, and other appurtenant items necessary to complete the work.

Note: The proposed ADA access ramp at the south end of the Municipal Lot and removal of the existing steel sheet pile bulkhead as shown on the project plans are NOT included under this section. They are included under Item 8 (Section 5) and General Work, respectively.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

PROJECT DESCRIPTION:

ITEM NO. 7.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:07 for further details and specifications.

ITEM NO. 7.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

The total estimated "A" quantity for this bid item is 4,520 tons. The total estimated "B" quantity for this bid item is 1,860 tons.

The total estimated quantity for this bid item is 6,380 tons.

See Subsection 11:07 for further details and specifications.

ITEM NO. 7.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

The total estimated "A" quantity for this bid item is 5,435 tons. The total estimated "B" quantity for this bid item is 605 tons.

The total estimated quantity for this bid item is 6,040 tons.

See Subsection 11:07 for further details and specifications.

ITEM NO. 7.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

The total estimated quantity for this bid item is 2,180 tons.

See Subsection 11:07 for further details and specifications.

ITEM NO. 7.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

The total estimated quantity for this bid item is 20,000 square feet.

See Subsection 11:07 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 7.6 – REHANDLED STOCKPILED STONE:

The work under this item is to be bid upon and executed at a unit price per ton of Rehandled Stone, and shall include all labor, materials, equipment, rigging, tools, and accessories required to clean, sort, inspect, temporarily stockpile at an upland, onsite location, and permanently place the existing stockpiled stone currently located within the Section 3 Staging Area alongside the north end of the Municipal Lot, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 6,000 tons.

See Subsection 11:07 for further details and specifications.

ITEM NO. 7.7 – GROIN SEALING:

In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 70 cubic yards of groin sealing.

See Subsection 11:07 for further details and specifications.

ITEM NO. 7.8 – PARKING LOT RECONSTRUCTION:

(A) Mill & Overlay: The work under this item is to be bid upon and executed at a unit price per square yard of completed asphalt work, and shall include all labor, materials, equipment, rigging, tools, and accessories required for all asphalt milling and construction work associated with the reconstruction of the existing parking lot within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, HMA Milling to an average depth of 2", 2" thick HMA 9.5M64 Surface Course, tack coat, polymerized joint adhesive, grading, compacting, and all other items necessary for construction.

The total estimated quantity for this bid item is 875 square yards of asphalt.

See Subsection 11:07 for further details and specifications.

PROJECT DESCRIPTION:

- (B) **Asphalt:** The work under this item is to be bid upon and executed at a unit price per square yard of completed asphalt work, and shall include all labor, materials, equipment, rigging, tools, and accessories required for all new asphalt work associated with the reconstruction of the existing parking lot within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, 6" thick dense graded aggregate base course, 4" thick HMA 19M64 Base Course, 2" thick HMA 9.5M64 Surface Course, tack coat, prime coat, polymerized joint adhesive, excavation, grading, compacting, and all other items necessary for construction.

The total estimated quantity for this bid item is 65 square yards of asphalt.

See Subsection 11:07 for further details and specifications.

- (C) **Striping:** The work under this item is to be bid upon and executed at a unit price per linear foot of installed traffic striping, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the application of long life thermoplastic traffic markings atop the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 675 linear feet of long life thermoplastic traffic markings.

See Subsection 11:07 for further details and specifications.

- (D) **Concrete Curb:** The work under this item is to be bid upon and executed at a unit price per linear foot of installed concrete curb, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete vertical curb which will surround the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 230 linear feet of concrete curb.

See Subsection 11:07 for further details and specifications.

PROJECT DESCRIPTION:

- (E) **Concrete Sidewalk:** The work under this item is to be bid upon and executed at a unit price per square yard of installed concrete sidewalk, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete sidewalk between the proposed section of seawall and proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, all concrete, reinforcement, formwork, 4" thick crushed stone base course, 4" thick concrete sidewalk, and all other items necessary for construction.

The total estimated quantity for this bid item is 255 square yards of concrete sidewalk.

See Subsection 11:07 for further details and specifications.

- (F) **Regulatory and Warning Signs:** The work under this item is to be bid upon and executed at a unit price per square foot of installed regulatory and warning signs, and shall include all labor, equipment, rigging, tools, and accessories required to install post-mounted signage designating handicap-accessible parking spaces within the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 6 square feet of signage.

See Subsection 11:07 for further details and specifications.

ITEM NO. 7.9 – PAVILION PEDESTRIAN BEACH ACCESS:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to construct the Pavilion pedestrian beach access structures within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, the furnishing, fabrication, and erection of all timbers and associated materials, including the timber piles, posts, joists, pickets, face beams, header beams, and decking; stainless-steel pipe and tube railings; concrete sidewalk and miscellaneous concrete; and all other items necessary for construction.

See Subsection 11:07 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #5: SEA BRIGHT; LIFEGUARD BUILDING TO SURF ST - SEAWALL REHAB:

The work under this section includes the reconstruction of approximately 351 linear feet of stone seawall and the construction of various appurtenant items which includes, but is not limited to: Adding additional stone to raise the elevation of the wall to +18.0 NAVD88, adding a seaward toe if one does not already exist, rehandling of the existing stone, grouting the top and landward face of the reconstructed wall, reconstructing the existing timber boardwalk including stairs and ADA access, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 8.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:08 for further details and specifications.

ITEM NO. 8.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

The total estimated "A" quantity for this bid item is 8,170 tons. The total estimated "B" quantity for this bid item is 1,445 tons.

The total estimated quantity for this bid item is 9,615 tons.

See Subsection 11:08 for further details and specifications.

ITEM NO. 8.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

The total estimated "A" quantity for this bid item is 4,220 tons. The total estimated "B" quantity for this bid item is 470 tons.

The total estimated quantity for this bid item is 4,690 tons.

See Subsection 11:08 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 8.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

The total estimated quantity for this bid item is 1,695 tons.

See Subsection 11:08 for further details and specifications.

ITEM NO. 8.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

The total estimated quantity for this bid item is 10,290 square feet.

See Subsection 11:08 for further details and specifications.

ITEM NO. 8.6 – REHANDLED STONE:

The work under this item is to be bid upon and executed at a unit price per ton of Rehandled Stone, and shall include all labor, materials, equipment, rigging, tools, and accessories required to excavate, extract, clean, sort, inspect, temporarily stockpile at an upland, onsite location, and permanently place the stone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

Note: The existing stone throughout the top layer of seawall in this section varies in size and classification. Each stone shall be classified in accordance with section 19:02.3a of the Jetty Stone Specifications and rehandled/reset into the appropriate layer of the reconstructed seawall.

The total estimated "A" quantity for this bid item is 2,725 tons. The total estimated "B" quantity for this bid item is 480 tons.

The total estimated quantity for this bid item is 3,205 tons.

See Subsection 11:08 for further details and specifications.

ITEM NO. 8.7 – GROIN SEALING:

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

See Subsection 11:08 for further details and specifications.

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PROJECT DESCRIPTION:

(B) New Groin Sealing: In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 75 cubic yards of groin sealing.

See Subsection 11:08 for further details and specifications.

ITEM NO. 8.8 – TIMBER BOARDWALK RECONSTRUCTION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the complete reconstruction of the timber boardwalk within southernmost end of Section 4 and the beginning of Section 5, as well as stairs and ADA access ramps, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

See Subsection 11:08 for further details and specifications.

SECTION #6: SEA BRIGHT; BOROUGH HALL SEAWALL REHAB:

The work under this section includes the partial reconstruction of approximately 461 linear feet of stone seawall and the reconstruction of various appurtenant items which includes, but is not limited to: Adding a seaward toe if one does not already exist, rehandling of stone along the seaward face of the wall, grout repair work along the top and landward face of the reconstructed wall if directed by the Project Manager, reconstruction of the pedestrian crossover staircase, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 9.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:09 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 9.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

The total estimated "A" quantity for this bid item is 3,580 tons. The total estimated "B" quantity for this bid item is 630 tons.

The total estimated quantity for this bid item is 4,210 tons.

See Subsection 11:09 for further details and specifications.

ITEM NO. 9.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

The total estimated "A" quantity for this bid item is 1,850 tons. The total estimated "B" quantity for this bid item is 205 tons.

The total estimated quantity for this bid item is 2,055 tons.

See Subsection 11:09 for further details and specifications.

ITEM NO. 9.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

The total estimated quantity for this bid item is 740 tons.

See Subsection 11:09 for further details and specifications.

ITEM NO. 9.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

The total estimated quantity for this bid item is 7,580 square feet.

See Subsection 11:09 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 9.6 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

The total estimated "A" quantity for this bid item is 3,580 tons. The total estimated "B" quantity for this bid item is 630 tons.

The total estimated quantity for this bid item is 4,210 tons.
See Subsection 11:09 for further details and specifications.

ITEM NO. 9.7 – GROIN SEALING (IF AND WHERE DIRECTED):

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

Note: The grout work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

See Subsection 11:09 for further details and specifications.

(B) New Groin Sealing: In accordance with Section 1:02.vii.B of the Project Description.

Note: The grout work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

The total estimated quantity for this bid item is 85 cubic yards of groin sealing.

See Subsection 11:09 for further details and specifications.

ITEM NO. 9.8 – PEDESTRIAN CROSSOVER RECONSTRUCTION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the complete reconstruction of the timber crossover within Section 6, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

See Subsection 11:09 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #7: SEA BRIGHT; DONOVAN'S TO VILLAGE RD SEAWALL REPAIR (IF AND WHERE DIRECTED):

The work under this section includes miscellaneous grout repair at various areas along approximately 926 linear feet of stone seawall which includes, but is not limited to: Grout work to seal the crest and landward face of the wall and the installation of concrete bags to fill existing voids in the seawall where deemed necessary by the Project Manager, as well as other appurtenant items necessary to complete the work.

Note: All work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 10.1 – GROIN SEALING:

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

See Subsection 11:10 for further details and specifications.

(B) New Groin Sealing: In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 165 cubic yards of groin sealing.

See Subsection 11:10 for further details and specifications.

ITEM NO. 10.2 – CONCRETE BAG REPAIRS:

The work under this item is to be bid upon and executed at a unit price per cubic yard for concrete filled bags (if and where directed), and shall include all labor, equipment, rigging, tools, and accessories required to fill the voids, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 300 cubic yards of concrete bags.

See Subsection 11:10 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #8: SEA BRIGHT; TRADEWINDS GAP SEAWALL CONSTRUCTION:

The work under this section includes the construction of approximately 20 linear feet of new stone seawall which includes, but is not limited to: Constructing a new stone seawall to bridge the gap in the existing stone seawall adjacent to the residential community of Tradewinds, grouting the top and landward face of the new seawall, and transitioning the new seawall into existing, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 11.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:11 for further details and specifications.

ITEM NO. 11.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

The total estimated "A" quantity for this bid item is 1,240 tons. The total estimated "B" quantity for this bid item is 220 tons.

The total estimated quantity for this bid item is 1,460 tons.

See Subsection 11:11 for further details and specifications.

ITEM NO. 11.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

The total estimated "A" quantity for this bid item is 640 tons. The total estimated "B" quantity for this bid item is 70 tons.

The total estimated quantity for this bid item is 710 tons.

See Subsection 11:11 for further details and specifications.

ITEM NO. 11.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

The total estimated quantity for this bid item is 260 tons.

See Subsection 11:11 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 11.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

The total estimated quantity for this bid item is 2,360 square feet.

See Subsection 11:11 for further details and specifications.

ITEM NO. 11.6 – GROIN SEALING:

In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 15 cubic yards of groin sealing.

See Subsection 11:11 for further details and specifications.

SECTION #9: MONMOUTH BEACH; NORTH BEACH SPLASH PAD REPAIR (IF AND WHERE DIRECTED):

The work under this section includes the repair and reconstruction of the existing splashpad at various areas along approximately 4,230 linear feet of concrete splashpad where deemed necessary by the Project Manager, as well as other appurtenant items necessary to complete the work.

Note: All work throughout this section is to be executed on an “if and where” basis, as directed by the Project Manager.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 12.1 – CONCRETE SPLASH PAD:

(A) Concrete Splash Pad Demolition: In accordance with Section 1:02.viii.A of the Project Description.

The total estimated quantity for this bid item is 375 square yards.

See Subsection 11:12 for further details and specifications.

(B) Concrete Splash Pad Reconstruction: In accordance with Section 1:02.viii.B of the Project Description.

The total estimated quantity for this bid item is 375 square yards.

See Subsection 11:12 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #10: MONMOUTH BEACH; VISTA CT - SEAWALL REHAB:

The work under this section is located, for reference purposes, approximately in line with Vista Court across Ocean Avenue, and includes the partial reconstruction of approximately 100 linear feet of stone seawall which includes, but is not limited to: Rehandling of stone along the seaward face of the wall in order to fill the large cavern/void which has formed in the seawall, grouting the top and landward face of the reconstructed wall, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 13.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:13 for further details and specifications.

ITEM NO. 13.2 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

The total estimated "A" quantity for this bid item is 3,105 tons. The total estimated "B" quantity for this bid item is 550 tons.

The total estimated quantity for this bid item is 3,655 tons.

See Subsection 11:13 for further details and specifications.

ITEM NO. 13.3 – GROIN SEALING:

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

See Subsection 11:13 for further details and specifications.

(B) New Groin Sealing: In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 20 cubic yards of groin sealing.

See Subsection 11:13 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #11: MONMOUTH BEACH; SOUTH OF BATHING PAVILION - SEAWALL REPAIR (IF AND WHERE DIRECTED):

The work under this section includes miscellaneous grout repair at various areas along approximately 753 linear feet of stone seawall which includes, but is not limited to: Grout work to seal the crest and landward face of the wall and the installation of concrete bags to fill existing voids in the seawall where deemed necessary by the Project Manager, as well as other appurtenant items necessary to complete the work.

Note: All work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 14.1 – GROIN SEALING:

- (A) Groin Sealing Removal:** In accordance with Section 1:02.vii.A of the Project Description.

See Subsection 11:14 for further details and specifications.

- (B) New Groin Sealing:** In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 135 cubic yards of groin sealing.

See Subsection 11:14 for further details and specifications.

ITEM NO. 14.2 – CONCRETE BAG REPAIRS:

The work under this item is to be bid upon and executed at a unit price per cubic yard for concrete filled bags (if and where directed), and shall include all labor, equipment, rigging, tools, and accessories required to fill the voids, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 310 cubic yards of concrete bags.

See Subsection 11:14 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #11A: MONMOUTH BEACH; BATHING PAVILION GAP SEAWALL CONSTRUCTION:

The work under this section includes the construction of approximately 630 linear feet of new stone seawall and the construction of various appurtenant items which includes, but is not limited to: Constructing a new stone seawall to bridge the gap in the existing stone seawall between the Valentine Street entrance and the south end of the Bathing Pavilion Lot, grouting the top and landward face of the new seawall, constructing a vehicular crossover structure up and over the new seawall, constructing a pedestrian staircase on the seaward side of the wall adjacent to the vehicular crossover structure, constructing a pedestrian crossover staircase and ADA ramps on the seaward side of the new seawall in front of the Pavilion building, reconstructing the existing pedestrian crossover structure at the south end of the Bathing Pavilion Lot, converting the contractor staging area to a gravel parking lot post-construction, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 15.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

See Subsection 11:15 for further details and specifications.

ITEM NO. 15.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

The total estimated "A" quantity for this bid item is 19,550 tons. The total estimated "B" quantity for this bid item is 3,450 tons.

The total estimated quantity for this bid item is 23,000 tons.

See Subsection 11:15 for further details and specifications.

ITEM NO. 15.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

The total estimated "A" quantity for this bid item is 10,095 tons. The total estimated "B" quantity for this bid item is 1,125 tons.

The total estimated quantity for this bid item is 11,220 tons.

See Subsection 11:15 for further details and specifications.

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PROJECT DESCRIPTION:

ITEM NO. 15.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

The total estimated quantity for this bid item is 4,055 tons.

See Subsection 11:15 for further details and specifications.

ITEM NO. 15.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

The total estimated quantity for this bid item is 41,100 square feet.

See Subsection 11:15 for further details and specifications.

ITEM NO. 15.6 – GROIN SEALING:

In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is 135 cubic yards of groin sealing.

See Subsection 11:15 for further details and specifications.

ITEM NO. 15.7 – VEHICULAR CROSSOVER CONSTRUCTION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to construct the vehicular crossover structure within Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, Precast Concrete Retaining Wall (landward side), the additional excavation, filter fabric, and jetty stone necessary to construct the seaward ramp, 8" Thick Concrete Surface Course, Steel Backed Timber Guiderail, Backfill, and all other items necessary for construction.

Note: The following tonnages of additional jetty stone necessary to construct the seaward ramp shall be assumed for estimating purposes.

1. Armor Cap Stone – 2,400 tons
2. Core Stone – 3,365 tons
3. Mat Stone – 440 tons

See Subsection 11:15 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 15.8 – TIMBER STRUCTURES:

- (A) **Pedestrian Crossover Reconstruction:** The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the partial reconstruction of the existing timber pedestrian ramp crossover at the southern end of Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

See Subsection 11:15 for further details and specifications.

- (B) **Stairs & ADA Ramp Construction:** The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the construction of new timber stairs and ADA ramp to provide access from the proposed elevated deck (by others) to be constructed above the crest of the seawall down to the beach fronting the Monmouth Beach Bathing Pavilion within Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

See Subsection 11:15 for further details and specifications.

- (C) **Pedestrian Staircase Construction:** The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the construction of the proposed timber pedestrian staircase adjacent to the proposed vehicle crossover at the northern end of Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

See Subsection 11:15 for further details and specifications.

ITEM NO. 15.9 – GRAVEL STAGING AREA

The work under this item is to be bid upon and executed at a unit price per square yard of installed Gravel Staging Area, and shall include all labor, equipment, rigging, tools, and accessories required to excavate, grade, and construct the gravel staging area within Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is 1,390 square yards.

See Subsection 11:15 for further details and specifications.

PROJECT DESCRIPTION:

ITEM NO. 15.10 – NFWF Landscaping (If and Where Directed):

The Borough, funded by a grant from the National Fish and Wildlife Foundation (NFWF), constructed dunes and installed extensive plantings in front of the Bathing Pavilion. The majority of this plantings conflicts with the proposed seawall alignment and will require replacement and/or relocation.

Note: All work throughout this section is to be constructed on an "if and where" basis, as directed by the Engineer.

Note: The determination whether to replace or relocate each plant indicated by the Engineer shall be at the Contractor's discretion. Should the Contractor decide to relocate a planting then the Contractor shall attempt to coordinate the transplanting with plant dormancy and weather conditions to maximize the chances of plant survival. If the plant does not survive transplanting for one year, then the Contractor shall replace the plant at no additional cost.

(A) Three Gallon Rosa Rugosa (Pink Flowering): The work under this item is to be bid upon and executed at a unit price per plant, and shall include all labor, materials, equipment, rigging, tools, and accessories required to either replace or remove, temporarily store onsite or at an approved location, and permanently transplant the landscaping as indicated on the project plans and as specified herein.

The quantity for this bid item is 475 Three Gallon Rosa Rugosa (Pink Flowering) plants.

See Subsection 11:15 for further details and specifications.

(B) One Gallon Rosa Rugosa (Pink Flowering): The work under this item is to be bid upon and executed at a unit price per plant, and shall include all labor, materials, equipment, rigging, tools, and accessories required to either replace or remove, temporarily store onsite or at an approved location, and permanently transplant the landscaping as indicated on the project plans and as specified herein.

The quantity for this bid item is 625 One Gallon Rosa Rugosa (Pink Flowering) plants.

See Subsection 11:15 for further details and specifications.

PROJECT DESCRIPTION:

SECTION #12: MONMOUTH BEACH; ADMIRALTY BULKHEAD REMOVAL:

The work under this section includes the removal of approximately 28 linear feet of dilapidated wooden bulkhead between the stone seawall and the concrete foundation wall of the Admiralty parking garage, filling the void with stone, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 16.1 – WOODEN BULKHEAD REMOVAL:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required to cut off, at grade, the existing dilapidated wooden bulkhead, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

See Subsection 11:16 for further details and specifications.

ITEM NO. 16.2 – NEW ARMOR STONE:

The work under this item is to be bid upon and executed at a unit price per ton of new Armor Stone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Armor Capstone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated "A" quantity for this bid item is 120 tons. The total estimated "B" quantity for this bid item is 20 tons.

The total estimated quantity for this bid item is 140 tons.

See Subsection 11:16 for further details and specifications.

PROJECT DESCRIPTION:

INVESTIGATION OF SITE AND CONDITIONS:

The Contractor, by the submission of a bid, acknowledges as follows: that he has satisfied himself as to the nature and location of the work; the general and local conditions including but not limited to those bearing on accessibility, transportation, disposal, handling and storage of materials; the availability of labor, water, supplies, materials, power and roads; the uncertainties of weather, tides and similar physical conditions at the sites of the work; the conformation and conditions of the ground, the surface or sub-surface materials, conditions and obstacles; the character of equipment and facilities needed prior to and during prosecution of the work.

Any failure of the contractor to acquaint himself with any and all factors bearing on the project will not relieve him from the responsibility for estimating properly the difficulty and the cost of successfully performing the work, and the responsibility for completing the project under the terms of the contract at the unit or lump sum prices bid in the proposal.

CONTRACT TIME:

The total allowed contract time is **545** calendar days. In the event of severe weather, which would not allow for work during these days, the contractor will be credited by the inspector against total elapsed work time. See Section 7:00 for further particulars.

NOTES:

- 1. The Contractor shall be fully mobilized and begin work ten (10) calendar days after receiving the Notice to Proceed letter from the Office of Coastal Engineering.**
- 2. The Contractor shall adhere to the following seasonal timing restrictions for each calendar year (NOT inclusive of environmental timing restrictions):**

SEA BRIGHT

- A. Section 1: No timing restrictions.**
- B. Section 2: (If & Where Directed) No timing restrictions.**
- C. Section 3: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.**
- D. Section 4: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.**
- E. Section 5: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.**
- F. Section 6: NO CONSTRUCTION BETWEEN MAY 25–SEPT. 7.**
- G. Section 7: (If & Where Directed) No timing restrictions.**
- H. Section 8: No timing restrictions.**

PROJECT DESCRIPTION:

MONMOUTH BEACH

- I. Section 9: (If & Where Directed) No timing restrictions.
 - J. Section 10: No timing restrictions.
 - K. Section 11: (If & Where Directed) No timing restrictions.
 - L. Section 11A: NO CONSTRUCTION BETWEEN MAR 15 – SEPT. 7.
 - M. Section 12: No timing restrictions.
3. Due to the compressed timeframe of the work required, multiple crews may be utilized to complete tasks simultaneously at the Contractor's discretion. The Contractor shall prioritize the completion of Sections 3-6 regardless of whether or not multiple crews are utilized.
 4. If it is anticipated that these items will not be complete by the start of the timing restriction, the Contractor must demobilize all plant and equipment and clear the beachfront areas entirely in these locations, including all unused stone before the timing restriction begins, unless otherwise directed by the Project Manager. The Contractor shall then remobilize after the timing restriction has ended and complete the work at NO ADDITIONAL COST to the State of New Jersey for any change in site conditions, fuel/material increases, remobilization, etc.
 5. For each day that the work continues, plant and equipment remains mobilized, and/or beachfront remain unclear from May 25th to September 7th for Sections 3 through 6 in Sea Bright and Section 11A in Monmouth Beach, the Department of Environmental Protection, may withhold from the Contractor's total compensation for the work the sum of ten-thousand (\$10,000.00) dollars, and the amount thus withheld shall not be considered as a penalty but as liquidated damages fixed and agreed to in advance by contracting parties because of the potential ramifications to beach revenue and the difficulty of fixing exact damages, as a proper compensation to the municipalities for the loss, inconvenience, and expense caused by such delay.

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PROJECT DESCRIPTION:

1:05

PROJECT SIGN:

The Contractor shall furnish and erect two (2) project signs, and shall maintain the signs and update the names of the officials listed on the signs following changes in governing bodies throughout the contract operations. The signs shall be placed at specific locations designated in the field by the Manager at the Sea Bright Municipal Parking Lot and Monmouth Beach Bathing Pavilion. Only the mayor of the municipality where the sign is located shall be featured on Line 11. The cost of the signs and of their erection, maintenance and removal shall be included in the lump sum price bid for Item No. 1 - General Work.

The text of the signs shall be as follows:

1. STATE OF NEW JERSEY
2. DEPARTMENT OF ENVIRONMENTAL PROTECTION
3. SHORE PROTECTION PROJECT NUMBER 4265-15

4. The construction of the
5. SEAWALL REPAIR AND CONSTRUCTION PROJECT
6. is designed as a protective measure to enhance and
7. preserve the New Jersey coastal shoreline.

8. CHRIS CHRISTIE, Governor
9. KIM GUADAGNO, Lt. Governor
10. BOB MARTIN, Commissioner
- 11A. DINA LONG, Mayor - Sea Bright
- 11B. SUSAN HOWARD, Mayor - Monmouth Beach

NOTE: Lines 1 to 3 to be 4 inches high
Lines 4 to 7 to be block letters 2 1/2 inches high
Lines 8 to 11 to be 2 inches high

The upper portion of the sign, Lines 1 to 3, shall be gold letters on a blue field. The lower portion, Lines 4 to 11 shall be blue lettering on a gold field. All lettering shall be upper case standard block form.

See Section 6:08 for additional Project Sign information.

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1:00 (38)

PROJECT DESCRIPTION:

1:06

DETERMINATION OF LOWEST BID AND CONTRACT AWARD:

Bids will be compared and awarded on the basis of the total amount of base bid, inclusive of "if and where" items, for all the work as outlined in the proposal form, including Item Nos. 1, 2, 3, 4.1, 4.2 ("A" Quantity ONLY), 4.3 ("A" Quantity ONLY), 4.4, 4.5, 4.6 ("A" Quantity ONLY), 4.7, 4.8A, 4.8B, 5.1, 5.2 ("A" Quantity ONLY), 5.3A, 5.3B, 6.1, 6.2 ("A" Quantity ONLY), 6.3 ("A" Quantity ONLY), 6.4, 6.5, 6.6 ("A" Quantity ONLY), 6.7A, 6.7B, 6.8A, 6.8B, 6.8C, 6.9, 7.1, 7.2 ("A" Quantity ONLY), 7.3 ("A" Quantity ONLY), 7.4, 7.5, 7.6, 7.7, 7.8A, 7.8B, 7.8C, 7.8D, 7.8E, 7.8F, 7.9, 8.1, 8.2 ("A" Quantity ONLY), 8.3 ("A" Quantity ONLY), 8.4, 8.5, 8.6 ("A" Quantity ONLY), 8.7A, 8.7B, 8.8, 9.1, 9.2 ("A" Quantity ONLY), 9.3 ("A" Quantity ONLY), 9.4, 9.5, 9.6 ("A" Quantity ONLY), 9.7A, 9.7B, 9.8, 10.1A, 10.1B, 10.2, 11.1, 11.2 ("A" Quantity ONLY), 11.3 ("A" Quantity ONLY), 11.4, 11.5, 11.6, 12.1, 13.1, 13.2 ("A" Quantity ONLY), 13.3A, 13.3B, 14.1A, 14.1B, 14.2, 15.1, 15.2 ("A" Quantity ONLY), 15.3 ("A" Quantity ONLY), 15.4, 15.5, 15.6, 15.7, 15.8A, 15.8B, 15.8C, 15.9, 15.10A, 15.10B, 16.1, 16.2 ("A" Quantity ONLY). If the lowest acceptable bid is within the funds available to finance the project, a contract will be awarded for all the work as bid upon.

If the total amount of the lowest acceptable bid exceeds the available project funds, the Department reserves the right to reduce the quantity of work so that a total dollar amount produced is within the available funds, and to award a contract on such a reduced basis.

The Department of Environmental Protection, Office of Coastal Engineering reserves the right either to award a contract for all work as bid upon, or to reject any and all bids, as may be deemed in the best interests of the State of New Jersey.

In the event of a discrepancy between a unit price bid and an extended total in the bid proposal, excluding omissions, the unit price shall govern.

In the event of an omitted unit price or extended total for any one line item, the inferred price shall govern.

1:07

TIDAL DATUM:

The datum plane of reference for this project is North American Vertical Datum of 1988 (NAVD88). Range of tide in the ocean is 4.70 feet.

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1:00 (39)

PROJECT DESCRIPTION:

1:08

NEW JERSEY PREVAILING WAGE ACT:

See section 5:04 herein for detailed requirements of the New Jersey Prevailing Wage Act. A copy of bulletin MW 210 entitled "Prevailing Rate of Wages on Public Contracts", issued by the State of New Jersey, Department of Labor and Industry, will be on file for inspection in the Trenton and Toms River offices of the Office of Coastal Engineering, together with "Prevailing Wage Determination", issued by the Commissioner of the Department of Labor and Industry, and will be attached to the contract for the project.

The following shall be added to Section 5:04:

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, may be obtained from the Davis-Bacon web site at <http://www.access.gpo.gov/davisbacon/nj.html> under the appropriate county where the project is to be performed, select the construction type heading: HEAVY.

Pay the prevailing wage rates determined by the United States Secretary of Labor and the New Jersey Department of Labor. If the prevailing wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the prevailing wage rate prescribed for that craft by the New Jersey Department of Labor, pay the higher rate.

State wage rates may be obtained from the New Jersey Department of Labor & Workforce Development (Telephone: 609-292-2259) or by accessing the Department of Labor & Workforce Development's web site at http://lwd.dol.state.nj.us/labor/wagehour/wagehour_index.html The State wage rates in effect at the time of award are part of this Contract, pursuant to Chapter 150, Laws of 1963 (N.J.S.A. 34:11-56.25, et seq.).

By submission of bid, the Contractor assures and certifies that it will comply with the minimum-wage and maximum-hour provisions of the Federal Fair Labor Standards Act.

If an employee of the Contractor or subcontractor has been paid a rate of wages less than the prevailing wage, the Department may suspend the Work, and declare the Contractor in default.

1:09

NEW JERSEY SALES AND USE TAX ACT:

See Subsection 5:04(A) herein for Sales Tax Exemption Statement.

1:10

DIVISION OF MOTOR VEHICLES REGULATIONS:

All vehicles used on this project must meet current State regulations for travel on highways. The Contractor must conform to N.J.A.C. 7:27-14 "Diesel Idling Regulations".

PROJECT DESCRIPTION:

1:11

AMERICANS WITH DISABILITIES ACT (A.D.A.):

Bidders are required to comply with the provisions of the Americans with Disabilities Act, (A.D.A.), as amended. This shall also pertain to any and all sub-contractors.

1:12

AFFIRMATIVE ACTION:

See Subsection 5:04 (B) herein for requirements. Bidders are required to comply with the requirements of P.L. 1975, c.127.

The parties to this contract agree to incorporate into this contract the mandatory language of sub-section 3.4(a) of the Regulations promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time and the contractor and/or sub-contractor agree to comply fully with the terms, provisions and obligations of said sub-section 3.4 (a), provided that said sub-section shall be applied subject to the terms of sub-section 3.4(d) of said regulations.

1:13

BUSINESS REGISTRATION:

All Contractors bidding the work under this contract shall comply with the provisions of P.L. 2001, c. 134, Business Registration. No state agency can enter into a contract with contractors unless first provided with proof of a valid business registration with the Division of Revenue. A hotline, the Client Registration Unit at Revenue, has been set up at (609)-292-1730 for validation of current status or new contractor registration.

1:14

PERMIT CONDITIONS:

The Contractor shall adhere to all permit conditions set forth in NJDEP Federal Consistency Determination File Nos. 1300-15-0005.1 CDT150001 and 1333-04-0001.3 CDT160001, dated November 2, 2015 and March 23, 2016, respectively, as located herein and any other applicable state, local, and federal permits. Any failure to adhere to all conditions currently and subsequently laid forth may result in fines levied to the Contractor from either the State or Federal Regulatory Enforcement Agencies.

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PROJECT DESCRIPTION:

1:15

PUBLIC LAW 2005, CHAPTER 51 (FORMERLY E.O. 134):

All Contractors bidding the work under this contract shall comply with the provisions of Public Law 2005, Chapter 51. No state agency can enter into a contract with contractors unless first provided with Public Law 2005, Chapter 51 certification that the Contractor has not solicited or made any contributions of money, pledge of contribution, including in-kind contributions that would bar the award of the contract.

Included are forms DPP c51-C&D, Ownership Disclosure Form, Disclosure of Investigations and Actions Involving Bidder form, MacBride Principles Form, Affirmative Action Supplement, and the Affirmative Action Employee Information Report (Form AA302), to be completed by the Contractor. It is the Contractor's responsibility to ensure that they are in full compliance with Public Law 2005, Chapter 51.

1:16

NOTICE OF EXECUTIVE ORDER 125 REQUIREMENT FOR POSTING OF WINNING PROPOSAL AND CONTRACT DOCUMENTS:

Pursuant to Executive Order No. 125, signed by Governor Christie on February 8, 2013, the Office of the State Comptroller ("OSC") is required to make all approved State contracts for the allocation and expenditure of federal reconstruction resources available to the public by posting such contracts on an appropriate State website. Such contracts are posted on the New Jersey Sandy Transparency website located at:

<http://nj.gov/comptroller/sandytransparency/contracts/sandy/>.

The contract resulting from this invitation to bid is subject to the requirements of Executive Order No. 125. Accordingly, the OSC will post a copy of the contract, including the invitation to bid, the winning bidder's proposal and other related contract documents for the above contract on the Sandy Transparency website.

In submitting its proposal, a bidder may designate specific information as not subject to disclosure. However, such bidder must have a good faith legal and/ or factual basis to assert that such designated portions of its proposal (i) are proprietary and confidential financial or commercial information or trade secrets or (ii) must not be disclosed to protect the personal privacy of an identified individual. The location in the proposal of any such designation should be clearly stated in a cover letter, and a redacted copy of the proposal should be provided.

The State reserves the right to make the determination as to what is proprietary or confidential, and will advise the winning bidder accordingly. The State will not honor any attempt by a winning bidder to designate its entire proposal as proprietary, confidential and/or to claim copyright protection for its entire proposal. In the event of any

PROJECT DESCRIPTION:

challenge to the winning bidder's assertion of confidentiality with which the State does not concur, the bidder shall be solely responsible for defending its designation.

REVIEW OF CONTRACTS:

Pursuant to N.J.A.C. 17:44-2.2, the Contractor shall maintain all documentation related to products, transactions, or services under this contract for a period of five years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

Furthermore, the Office of Coastal Engineering, the Natural Resources Conservation Service, the Comptroller General of the United States, or any of their duly authorized representatives reserves the right to access any books, documents, papers, and records of the contractor which are directly pertinent to the contract for the purpose of making examination, excerpts, and transcriptions for a period of three years after final payment has been made and all other pending matters are closed.

DIVISION OF PURCHASE AND PROPERTY (DPP) FORMS:

All Contractors bidding the work under this contract shall comply with the provisions of the State of New Jersey DPP, Information Sheet and Certification for Delegated Purchasing Authority Transactions. No state agency can enter into a contract with contractors unless first provided with the properly executed DPP forms, included herein. Included are the following forms:

1. Ownership Disclosure Form
2. Disclosure of Investigations & Actions Involving Bidder Form
3. Disclosure of Investment Activities in Iran Form
4. Source Disclosure Certification Form
5. MacBride Principles Certification Form
6. Vendor Certification & Political Contribution Disclosure Form
7. Two Year Chapter 51 / Executive Order 117 Vendor Certification & Disclosure of Political Contributions Form
8. Affirmative Action Supplement Form (AA302)

It is the Contractor's responsibility to ensure that they are in full compliance with the State of New Jersey DPP, Information Sheet and Certification for Delegated Purchasing Authority Transactions.

S2:00 **STD. REVISED 9/1/63, 3/29/73, 11/1/75, 6/1/79, 10/1/96, 3/27/08**

***Note: Replace "Office of Engineering and Construction" and "Bureau of Coastal Engineering" with "Office of Coastal Engineering" herein. Any reference herein to the Manager of the Bureau shall refer to the Administrator of the Office.**

2:00 **PROJECT PLANS AND SPECIFICATIONS:**

2:01 **PROJECT-SPECIFICATIONS:**

As issued, include Project Advertisement, Terms and Conditions of bidding and Contract Award, Project Specifications both general and technical and the project Proposal Form.

The specifications will be annexed to and become part of the contract.

2:02 **THE PROJECT PLANS:**

Are issued to accompany and be a part of the specifications. The plans are identified by date and number of sheets in Section 1:00 of these specifications.

2:03 **GENERAL STATEMENT:**

All labor, material and appliances to be furnished and all work to be done by the Contractor shall strictly conform to the specifications and plans. The specifications and plans are intended to be consistent with each other, but should there be any inconsistency either the specifications or plans shall take precedence, as decided by the Supervisor.

The work herein involved is to be complete in every way notwithstanding that every detail is not particularly mentioned. Any discrepancy shall be called to the attention of the Manager, in writing, who shall give a decision in writing.

Any desired change or modification of the project work herein specified must be evidenced by a written order by the Manager. Where a change or modification involves work, materials, products, or structures not specified herein, it must be evidenced by a supplemental work order describing and specifying the additional work and fixing the amount of compensation. Such supplemental work orders shall extend and be part of the original contract and surety bond.

All orders issued by the Manager and all supplemental work orders shall be delivered to the Contractor or his representative before the work thereunder is begun.

S2:00 STD. REVISED 9/1/63, 3/29/73, 11/1/75, 6/1/79, 10/1/96
S3:00 STD. REVISED 8/1/57, 10/23/57, 8/1/61, 9/1/63, 4/22/70,
1/4/71, 3/29/73, 2/15/74, 11/1/75, 6/1/79, 6/11/82,
10/1/96, 3/27/08, 4/15/16

2:03 GENERAL STATEMENT Con't:

If in the opinion of the Contractor, the construction operations as shown on the plan or staked on the ground will damage or undermine existing structures or properties adjacent to the site of the work, the Contractor shall request an examination and determination by the Bureau Manager before proceeding with the work.

Such examination and determination by the Bureau Manager shall not relieve the Contractor in any way from his proper responsibility for damages caused to structures or properties adjacent to the site of the work by his operations.

2:04 TIDES AND DATUM:

The datum plane of reference is indicated on the plans. It has been established at the site of the work and will not be changed during the progress of the work. The range of tide is shown on the plans.

3:00 BIDDING AND CONTRACT AWARD:

3:01 PROPOSAL AND ESTIMATED QUANTITIES:

Bids are solicited and shall be submitted on the Proposal Form attached to these specifications. A unit price or lump sum as specified shall be bid for each item of work complete in place. In the event that there is a discrepancy between the unit price and extended total, excluding omissions, the unit price shall govern.

In the event of an omitted unit price or extended total for any one line item, the inferred price shall govern.

For the purpose of competitive bidding, approximate quantities have been calculated from the plans as shown, and are given in the attached Proposal Form for bidding. It must be distinctly understood that these quantities are approximate only, are the best obtainable at the present time, and will be used by all bidders submitting proposals.

3:02 QUALIFICATIONS OF BIDDERS:

The receipt and opening of bids is subject to the proper qualifications of each bidder in accordance with R.S. 52:35, together with all amendments thereto.

S3:00 **STD. REVISED 8/1/57, 10/23/57, 8/1/61, 9/1/63, 4/22/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 6/1/79, 6/11/82, 10/1/96, 3/27/08**

3:02 **QUALIFICATIONS OF BIDDERS Con't:**

The Contractor's Qualifications Affidavit, which is part of the Proposal Form, shall be executed under oath by each bidder.

In determining the qualifications of a bidder, the Department of Environmental Protection, Office of Engineering and Construction, will consider his record in the performance of any contracts for similar work into which he may have entered with the State of New Jersey, or with any Federal Department or Agency or with other public bodies; it expressly reserves the right to reject the bids of such bidder if such record discloses that such bidder, in its opinion, has not properly performed such contract or has habitually, and without just cause, neglected the payment of bills, or has otherwise disregarded his obligation to sub-contractors, employees, or who has failed to satisfactorily complete a previous contract.

3:03 **SUBMITTING BIDS:**

Bids received after the time named in the Project Advertisement or in unsealed envelopes will not be considered. Bids and guarantees must be submitted sealed in the bid envelopes furnished with the Proposal Forms. Bids received in other than required bid envelopes may be considered informal by the Department of Environmental Protection, Office of Engineering and Construction. The bid envelope should be marked in the places designated thereon with the name and address of the bidder, the number of the project for which the bid is made, and the date and hour of the opening bids.

All bids must be upon the Proposal Form attached thereto. The Proposal Form shall be submitted with the advertisement and specifications attached as issued for bidding. Bidders are cautioned not to attach any conditions, limitations, or provisos to the proposals as such conditions, limitations or provisos will render their bid informal and may cause its rejection. The right is reserved to waive any informality or to reject any or all bids as may be deemed best in the interest of the State of New Jersey.

S3:00 **STD. REVISED 8/1/57, 10/23/57, 8/1/61, 9/1/63, 4/22/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 6/1/79, 6/11/82, 10/1/96, 3/27/08, 11/19/15**

3:03 **SUBMITTING BIDS Con't:**

No proposal will be considered unless accompanied by Bid Bond or Certified Check made payable to the order of the DEPARTMENT OF ENVIRONMENTAL PROTECTION for at least ten (10%) percent of the amount bid, a certified statement from a Bonding Company acceptable to the State of New Jersey; stating that it will furnish required performance and payment bonds for the Contractor upon the award of the work and the required Qualification Affidavit which is issued as part of the Proposal. The Contractor will be required to execute and deliver a performance surety bond to the Department of Environmental Protection, Office of Engineering and Construction as part of the contract, within ten (10) days after the award of contract. The bond shall be in an amount equal to one hundred (100%) percent of the contract amount, with such sureties as shall be approved by the State of New Jersey, to secure the faithful performance of the contract; to indemnify and save harmless the said State of New Jersey from all proceedings, suits or actions of any name or description; to assure the payment of all persons performing labor and/or furnishing material in connection with the project.

Any change in the plans, specification agreements, or quantities without the consent of the bondsmen, shall in no way vitiate said bond. The bond shall be given in compliance with the requirements of the statutes of the State of New Jersey in respect to bonds of Contractors on public works, Revised Statutes of New Jersey, Sections 2A:44-143 through 147, as amended and supplemented.

3:04 **CONTRACT AWARD:**

The Department of Environmental Protection, Office of Engineering and Construction reserves the right to award a contract under this project within the funds available for the project on the basis of the lowest accepted bid received as determined by the provisions in section 1:00 herein, or to reject any or all bids as it may deem best in the interests of the State of New Jersey. The apparent low bidder must furnish Performance & Payment Bonds in order to receive award. The terms and conditions of bidding and contract award as set forth in these specifications and in section 1:00 of these specifications shall become a part of the contract agreement as though recited and contained therein.

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S4:00 **STD. REVISED 8/1/57, 10/23/57, 8/1/61, 9/1/63, 4/22/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 6/1/79, 6/11/82, 10/1/96, 3/27/08**

3:05 **ADDENDUM:**

The Department of Environmental Protection, Office of Engineering and Construction reserves the right at any time prior to the announced time for receipt of bids to amend the specifications, plans and proposal form in the interest of the State of New Jersey. Addendums that may result in material changes to bid prices shall be given five (5) additional calendar days for the bid of the project. Clarifications of such items as typographical errors or such immaterial items as deemed by the Bureau will result in the issuance of a "Clarification Statement" with no additional time being allotted.

4:00 **THE DEPARTMENT OF ENVIRONMENTAL PROTECTION:**

4:01 **DEFINITION:**

The term "Department" in the specifications and contract refer to the Department of Environmental Protection. The term "Commissioner" refers to the Commissioner of Environmental Protection. The term "Office" refers to the Office of Engineering and Construction. The term "Manager" refers to the Manager of the Bureau of Coastal Engineering of the aforesaid Office. The terms mentioned above may appear in the specifications, contract or correspondence relating to this project.

4:02 **SUPERVISION AND INSPECTION:**

The work will be conducted under the general direction of the Manager. He will be represented on the work site by as many assistants as may be necessary. The Contractor shall give twenty-four (24) hours notice when he needs the services of the Manager. The Manager may appoint Inspectors whose duty it shall be to exercise supervision of operations and to enforce compliance with the evident intent and meaning of the of the contract and these specifications.

The presence of the Inspectors shall not relieve the Contractor of his responsibility for proper execution of the work.

If the Contractor considers any work required of him to be outside the requirements of the contract or considers any record or ruling of the Inspector unfair, he shall ask for written instructions or decision

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4:02 **SUPERVISION AND INSPECTION Con't:**

immediately and then file a written protest with the Manager against the same within five (5) days of the request, or be considered as having accepted the record or ruling.

The Contractor, if dissatisfied with a ruling of the Manager may request a hearing before the Director of the Office of Engineering and Construction and at the hearing may present evidence to justify a different ruling. The decision of the Director of the Office shall be final. Request for such a hearing shall be made in writing to the Director of the Office not more than two (2) days after the date of the ruling by the Manager. No extensions of time will be allowed the Contractor during the processing of such a request.

The order in which the work will be prosecuted will be indicated from time to time by the Manager. The locations and limits of the work shall be plainly indicated in advance by stakes and ranges established by the Manager.

4:03 **PROJECT OFFICE:**

The Contractor shall furnish and maintain a suitable office at the site of the work for the use of the Manager and Inspectors on the project. The office must be complete in all respects, fully furnished as specified herein, and ready for occupancy by the Manager and Inspector at least one day prior to the beginning of project operations. The office shall be located as directed by the Manager, insofar as possible shall be placed so as to allow all truck deliveries of materials to the project to pass in front of the office for official inspection and signatures. The Manager may direct that the office be relocated during the course of the project work if conditions require.

The office construction, location and facilities must be satisfactory to the Manager, with the facilities to include a toilet, in addition to all other furnishings hereinafter specified. The office shall have a floor area of not less than one thousand five hundred (1,500) square feet, shall be waterproof, and shall be equipped with close fitting door and windows which can be locked.

The office shall be equipped with 2 (2) desks, not less than two and one half (2 ½) feet by five (5) feet, containing not less than two (2) drawers

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4:03 **PROJECT OFFICE Con't:**

with locks, three (3) office chairs; one (1) new computer, one (1) scientific calculator, and a plan table not less than three (3) feet by five (5) feet. The Contractor shall provide a telephone and pay for all base charges including local scope area calls. Toll calls made by the Manager or Inspector will be reimbursed to the Contractor by billing monthly on State Form. The Contractor shall provide light, air conditioning and heat the office to maintain a 68-72 degrees Fahrenheit temperature range when weather conditions require it.

The office and all its facilities shall be maintained in good condition throughout the entire time the project is in operation. The cost of furnishing and maintaining such office and facilities shall be included in the unit price of lump sum bid for the project work and payment therefore shall be considered as included in the partial and final payment for contract work.

4:04 **OTHER FACILITIES TO BE FURNISHED:**

The Contractor will be required to furnish on request, such boats, boatmen, men and material as necessary for supervision, surveying or control work. The Contractor will be required to furnish lumber and other material for the stakes, ranges, bench marks and tide gauges.

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5:00 **THE CONTRACTOR:**

5:01 **DEFINITION:**

Wherever the term "Contractor" is used it is understood to refer to the first party of the contract. Sub-contractors as such will not be recognized.

However, the Contractor shall not award to, or allow any work to be done, by a sub-contractor, under this project, without the written approval of the Manager.

The Contractor shall formally request of the Manager, in writing, approval of the sub-contractor and approval of his use on the project. The judgment of his suitability for approval shall be made from a written statement to accompany the request. The statement shall contain the following: The Contractor's reason for employing a sub-contractor; the sub-contractor's history in detail, a performance of similar work, equipment, supervisory personnel, financial status and other information showing his ability to perform the proposed work in compliance with the plans and specifications to the satisfaction of the Manager.

The Contractor must at all times either be personally present upon the work or be represented thereon by a responsible agent who shall be clothed with full authority to act for him to all cases and to carry out any instructions relative to the work which may be given by the Manager either personally or through authorized representative.

The Contractor shall employ competent individuals to do the work. Whenever the Manager shall notify him or his representatives in charge, in writing, that any individual on the work is unfit for the place or is working contrary to the provisions of the specifications or that instruction of the Manager, he shall thereupon be removed from the project.

The Contractor must acquaint himself fully of the conditions relating to the construction of the project, the employment of labor thereon, all Federal and State Laws and Municipal Ordinances and regulations pertaining thereon.

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5:01 **DEFINITION Con't:**

The Contractor, by the submission of the proposal and bid for this project, agrees, that he has personal knowledge of the site of the project, of the physical conditions, of the surface and sub-surface conditions, of the tides, and datum and all hazards, known or anticipated and that the lack of any such knowledge affecting the performance fulfilling the provisions of the contract.

5:02 **OFFICIAL ADDRESS:**

The Contractor shall establish and maintain an official address in the State of New Jersey for service of all notices and papers in connection with the contract.

5:03 **SAFETY:**

The Contractor shall keep proper lights each night between the hours of sunset and sunrise, upon all plant connected with the work. Upon all ranges or other markers in connection with it when deemed necessary by the Manager, and upon all buoys which may be dangerous or obstruct navigation, and shall be responsible for all damages resulting from any neglect or failure in this respect. All excavations or other obstructions, which may endanger lives or property, shall be properly lighted and marked with railings or other guards.

Any loss or damage arising through the nature of the work to be done from the action of the elements or from any unforeseen or unusual obstruction or difficulty which may be encountered in the prosecution of said work during the contract period shall be borne by the Contractor.

The Contractor shall be responsible for the safety of his employees, plant, and materials and for any damage or injury done by or to them from any source or cause and shall comply with all laws of New Jersey relating to insuring of employees employed on the project.

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5:04 **(A) FEDERAL, STATE AND LOCAL LAWS:**

The Contractor shall be responsible for the strict observance of his employees of the laws of the United States affecting operations under the contract.

The Contractor shall comply with the provisions of Section 34:11-1, which act provides for a minimum wage and with the provisions of Section 34:11-1, which act provides that no laborer or mechanic shall work more than eight (8) hours in any one calendar day. Also Revised Statutes 10:2-1 to and inclusive of Section 10:2-4, which prohibits any discrimination in employment or labor or purchase of material on account of race, color or creed on public work. The Contractor agrees that:

a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;

b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;

c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$ 50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and

d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder

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5:04 **(A) FEDERAL, STATE AND LOCAL LAWS Con't:**

d. con't. may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

The work under this project shall be subject to the provisions of Chapter 150, P.L. 1963 of the State of New Jersey, designated as the "New Jersey Prevailing Wage Act". The Contractor will be required to comply with the provisions of said law. A copy of Bulletin MW 210 entitled "Prevailing Rate of Wages on Public Contracts", issued by the New Jersey Department of Labor in six (6) pages, is attached to and made a part of these specifications.

Pursuant to Chapter 150, P.L. 1963, of the State of New Jersey, the current Prevailing Wage Rate Determination established by the Commissioner of Labor and Industry is available for reference at the Department of Environmental Protection, Office of Engineering and Construction, Bureau of Coastal Engineering, 1510 Hooper Avenue, Toms River, New Jersey 08753. The Contractor, and any sub-contractors will be required to pay all workman engaged in the performance of services directly upon the project the prevailing rate of wages specified in said determination. This determination is conclusive for a period of two (2) years from date of issuance unless superseded within said two (2) years by a later determination.

Employers not paying the itemized employee benefits to a payee designated in a collective bargaining agreement shall pay them directly to the employee on each payday.

The Contractor and any sub-contractor, will be required to keep an accurate record showing the name, craft or trade and actual hourly rate of wages paid to each workman employed by them in connection with the project. Such record shall be preserved for two (2) years from date of payment.

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5:04 **(A) FEDERAL, STATE AND LOCAL LAWS Con't:**

The Contractor, and any sub-contractor, will be required to post the prevailing wage rate for each craft and classification involved, as determined by the Commissioner of Labor, including the effective date of any changes thereof, in prominent and easily accessible places at the site of the work, and at such place or places as are used by them to pay workman their wages.

Pursuant to N.J.S.A. 34:11-56.27, in the event it is found that any worker, employed by the contractor or any subcontractor covered by said contract, has been paid a rate of wages less than the prevailing wage required to be paid by such contract, the New Jersey Department of Environmental Protection may terminate the contractor's or subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages and to prosecute the work to completion or otherwise.

Reference is made to Chapter 30, P.L. 1966 as amended. The materials, supplies or services required for execution and completion of the work under this project are not subject to the provisions of the New Jersey Sales and Use Tax Act, Chapter 30, P.L. 1966 as amended.

Copies of Form ST-4, EXEMPT USE CERTIFICATION may be obtained from the State Division of Taxation, Sales Tax Bureau, 363 West State Street, Trenton, New Jersey 08625, or from the Office of Engineering and Construction, P.O. Box 419, Trenton, New Jersey, 08625. The Sales and Use Tax sections, which apply, are Nos. 8 (w) and 9 (a) (1). The project number, name of the Department and brief description of the project should be shown on the certificate for proper identification and reference.

The Contractor shall comply with the Laws of the United States and the State of New Jersey as to the inspection of hulls or boilers, etc. and the licensing of Masters and Engineers or other members of the crews of his vessels or plant. He shall conform to such sanitary requirements as may be prescribed by the State or Municipal Laws. The Contractor shall comply with any State code or United States code, which applies to any of the work to be done under the contract.

All applicable State Laws, Municipal Ordinances and the rules and regulations of all authorities having jurisdiction of the site and construction of the project shall apply to this project throughout and

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5:04 **(A) FEDERAL, STATE AND LOCAL LAWS Con't:**

they shall be deemed to be included in the contract the same as though herein written out in full.

5:04 **(B) AFFIRMATIVE ACTION PLAN:**

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that all employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the public agency compliance officer setting forth provisions of this nondiscrimination clause;

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex;

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment;

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5:04 **(B) AFFIRMATIVE ACTION PLAN Con't:**

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to *N.J.S.A. 10:5-31 et seq.*, as amended and supplemented from time to time and the Americans with Disabilities Act.

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by *N.J.A.C. 17:27-7.2*; provided, however, that the Dept. of LWD, Construction EEO Monitoring Program may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B, and C, as long as the Dept. of LWD, Construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with *N.J.A.C. 17:27-7.2*. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:

(A) If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer, pursuant to *N.J.S.A. 10:5-31 et seq.*, as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities to minority and women workers directly, consistent with this chapter. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not

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5:04 **(B) AFFIRMATIVE ACTION PLAN Con't:**

refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions:

(1) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to *N.J.A.C. 17:27-5.3*, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) The contractor or subcontractor shall interview the referred minority or women worker.

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5:04 **(B) AFFIRMATIVE ACTION PLAN Con't:**

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However,

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5:04 **(B) AFFIRMATIVE ACTION PLAN Con't:**

where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, through its website, for distribution to and completion by the contractor, in accordance with *N.J.A.C. 17:27-7*. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer. The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and/or off-the-job programs for outreach and training of minorities and women.

(D) The Contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be re-requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to *N.J.A.C. 17:27-1.1 et seq.*

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5:05 **STAKES AND BENCH MARKS:**

The Contractor will be required to preserve all stakes and benchmarks, established on the work until duly authorized by the Manager to remove the same. All stakes and benchmarks disturbed or removed without the permission of the Manager shall be replaced at the expense of the Contractor.

5:06 **PROPERTY PROTECTION:**

The Contractor will be required to protect all concrete pavement, curb, sidewalk, and bulkhead from any damage during the construction of the work. If any such property is damaged by the Contractor or his agents, or employees, he will be required to replace the damaged property to the entire satisfaction of the Manager.

5:07 **PATENTS:**

The Contractor shall hold and save harmless the State of New Jersey from liability of any nature or kind including expenses and costs for, or on account of, any patented process material or method, used in this project, or royalties arising from his use of any patented process material or method in any way involved in this project.

5:08 **(A) INDEMNIFICATION:**

The Contractor acknowledges that at all times under this contract he shall be acting in the capacity of an independent Contractor, and as such shall be solely liable for all claims of any kinds and description including any and all damages awarded in any suit or proceeding including costs thereof, to which the Contractor may be subjected, by reason of injury to the person or property of others, including employees, resulting from the performance of the project, or through negligence of the Contractor, or through any improper or defective machinery, implements or appliances used by the Contractor in the performance of the project or through any act or omission on the part of the Contractor, his sub-contractor, employees, agents, or servants; the Contractor agrees that there shall be no liability upon the State of New Jersey, through or by any and all of its Departments, Divisions or sub-divisions thereof including but not limited to its officers, agents, servants, or employees thereof, arising out of the performance by the Contractor of his obligations as set forth herein, and the Contractor further agrees to indemnify and save harmless the State of New Jersey, through or by any and all of its Department, Division, or Sub-Division thereof including but not limited to its officers, agents, servants, or employees thereof, from any liability and from all costs and expenses of any kind to which the State of New Jersey

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5:08 **(A) INDEMNIFICATION Con't:**

through or by any and all of its Departments, Divisions, or Sub-Divisions thereof, including but not limited to its officers, agents, servants, or employees thereof, may be put by reason of injury or claim of injury to persons or property resulting or arising from the performance by the Contractor, his servants, licensees, agents, or invitees of his obligations herein.

Contractor waives any right of recovery for contribution from the State of New Jersey, through or by any and all of its Departments, Divisions, or Sub-Divisions thereof, including but not limited to its officers, agents, servants, or employees thereof, for any liability sustained by the Contractor under this contract including but not limited to claims for injury to person or property resulting from any portion of the work performed under this contract which may be deemed to be inherently dangerous.

5:08 **(B) INSURANCE:**

Prior to the commencement of the work under the contract for which these specifications are a part the Contractor shall furnish to the Manager a Certificate of Insurance from a responsible insurance company, authorized to do business in New Jersey covering Workmen's Compensation, Public Liability and Property Damage Claims, and which certificates shall contain a provision that the policies of which said certificates are evidence insure and protect the Contractor, the State of New Jersey through or by any and all of its Departments, Divisions, Sub-Divisions thereof, including but not limited to its officers, agents, servants, or employees thereof, the Department of Environmental Protection, and the Municipalities in which the site of the work is located in the amounts listed as follows:

BODILY INJURY

<u>EACH PERSON</u>	<u>EACH OCCURRENCE</u>	<u>EACH OCCURRENCE</u>
\$1,000,000.00	\$3,000,000.00	\$1,000,000.00

Against all suits and costs of every kind and description and for all damages to which the Contractor, the State of New Jersey, through or by any kind and all of its Departments, Divisions, or Sub-Divisions thereof, including but not limited to its officers, agents, servants, or employees

S5:00 STD. REVISED 8/1/57, 8/18/57, 4/17/69, 3/19/73, 3/29/73, 2/15/74, 6/6/74, 11/1/75, 6/1/79, 10/1/96, 1/30/03, 3/27/08, 3/8/12, 7/20/16

S6:00 STD. REVISED 8/1/57, 8/1/61, 12/13/67, 4/17/69, 4/22/70, 8/18/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 7/20/77, 6/1/79, 6/11/82, 10/1/96, 3/27/08

5:08 **(B) INSURANCE Con't:**

thereof, may be subjected by reason of injury to the person or property of others, including employees, resulting from the performance of the project or through the negligence of the Contractor or through any improper or defective machinery, implements or appliances used by the Contractor in the project, or through the act of omission on the part of the Contractor, his sub-contractors, agents, employees, or servants; and the Contractor shall be liable for all damages to, or claims by third persons including accidents or damage or injury which follow naturally and proximately from the type, nature or character of the project, and all operations incidental thereto to be performed by the Contractor or sub-contractors or by anyone directly or indirectly employed by either or any of them, and whether caused by acts of omission in the prosecution of the work.

Where the work to be performed by the Contractor is the result of a joint venture between the State and any of its Municipalities or Sub Divisions or agencies or with any person or entity whatsoever where the costs of such projects are being shared by the respective parties to the joint venture, all of the terms, conditions and undertaking by the Contractor herein shall run in favor of such Municipality, Sub Division, agency person or entity. The Department of Environmental Protection, Office of Engineering and Construction at any time, may examine the complete policies listed on the said insurance certificate.

6:00 **GENERAL CONSTRUCTION:**

6:01 **OBSTRUCTION OF DRAINAGE:**

If it is necessary during the progress of the work to interrupt or obstruct the natural drainage or flow from artificial drains, waterways, or mosquito ditches, the Contractor shall make proper provisions for taking care of such drainage so that no damage of any kind or character shall result, and if the Contractor shall neglect so to do he shall be liable therefore and shall indemnify and save harmless the State of New Jersey from all liability on damage which may result from such negligence.

S6:00 **STD. REVISED 8/1/57, 8/1/61, 12/13/67, 4/17/69, 4/22/70, 8/18/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 7/20/77, 6/1/79, 6/11/82, 10/1/96, 3/27/08, 7/20/16**

6:02 **MISPLACED MATERIAL:**

Should the Contractor, during the progress of the work lose, throw overboard, sink, or misplace any material, plant, machinery, or appliance, which in the opinion of the Manager may be dangerous to or obstruct navigation, or constitute a menace to property he shall recover and remove the same with the utmost dispatch.

The Contractor shall be given immediate notice with description and location of such obstructions from the Manager, and when required shall mark or buoy such obstructions until the same is removed. Should he refuse, neglect, or delay compliance with the above requirements, such obstructions may be ordered removed by the Manager and the costs of such removal may be deducted from any money due or to become due the Contractor.

6:03 **WATER:**

The Contractor shall furnish all water required to do the work and include the cost thereof in his bid.

6:04 **RIGHTS-OF-WAY:**

In the event the Contractor shall deem it necessary to obtain rights-of-way, storage areas, or other facilities, other than those provided by the Department of Environmental Protection, Office of Engineering and Construction, they shall be procured, used, and returned at his expense.

6:05 **ACCESS TO ROADWAY AND TRESTLE:**

The Contractor shall include in his bid for the work the cost of providing and removing all access roadways and trestles required by his operations. Ramps and trestles shall be constructed in such a manner as to make them safe to carry all construction loads. The Contractor shall be responsible for the design, construction, and complete removal of such structures.

6:06 **DAMAGE TO STRUCTURES:**

When necessary, and with the approval of the Manager, permission is given for the removal of any part of an existing permanent structure during the progress of the work; the Contractor shall replace the materials so removed or damaged with new materials of the same kind and quality as that removed or damaged, and reestablish to a completed

S6:00 **STD. REVISED 8/1/57, 8/1/61, 12/13/67, 4/17/69, 4/22/70, 8/18/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 7/20/77, 6/1/79, 6/11/82, 10/1/96, 3/27/08**

6:06 **DAMAGE TO STRUCTURES Con't:**

finished condition and appearance. No allowance will be made the Contractor for such work, which shall be assumed as included in the bid for the new work.

6:07 **CONSTRUCTION MATERIALS:**

All construction materials furnished for the work shall be new and unused and shall strictly conform to the grade and quality hereinafter specified.

6:08 **PROJECT SIGN:**

The Contractor shall furnish and erect one or more project signs, complete with necessary supports, at locations to be designated in the field by the Manager. The signs shall be placed at least one (1) day prior to the beginning of the project operations, and shall be maintained by the Contractor throughout the project operations. The number and text of the signs shall be as indicated in section 1:00, and the construction and materials shall be as hereinafter described.

Upon completion of the project, the signs shall be removed by the Contractor and shall become his property. Final payment under the project will not be made until the signs have been removed.

The cost of the signs and appurtenant work shall be included in the bid as described in section 1:00.

The signs shall be 3/4" plywood, Marine-Ext. DFPA, four (4) feet high by eight (8) feet long. The edges shall have two (2) coats of primer, plus one (1) intermediate and one (1) finish coat; the front and back, one (1) coat of primer and one (1) coat of intermediate.

The upper portion of the sign shall bear gold letters over a dark blue field. The lower portion shall bear blue letters over a gold field. All lettering shall be standard upper case block letters. The work and lettering shall be of professional quality. Should the sign flake or fade during the contract time, it shall be repainted as necessary.

The Manager may order changes in the names and category if required to convey existing conditions. The height and size of lettering may be varied to give proportion to the sign. See Section 1:00 for legend, sizes and wording.

S7:00 **STD. REVISED 8/1/57, 8/1/61, 12/13/67, 4/17/69, 4/22/70, 8/18/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 7/20/77, 6/1/79, 6/11/82, 10/1/96, 3/27/08, 11/19/15, 7/20/16**

7:01 **CONTRACT TIME:**

The Contractor will be required to begin work under the contract within ten (10) calendar days after the date of written notice from the Manager, to begin work and must prosecute the work with due dispatch and with sufficient machinery and appliances, in good order to insure the completion of the work within the number of calendar days after the date of the commencement of the work as stated in Section 1:00 of these specifications. If at any time after the date fixed for beginning work, it shall be found that project operations in the opinion of the Manager, are not being carried on at such a rate to complete the work within the time herein specified, the Manager shall have the power after due notice in writing to the Contractor, to employ such additional plant or labor as may be necessary to insure proper prosecution of the work and any excess cost thereto over what the work should have cost at the contract rate, shall become due the Contractor. This provision however, shall not affect the right of the Department of Environmental Protection to annul the contracts.

7:02 **SUNDAYS AND LEGAL HOLIDAYS:**

No work shall be done on Sundays and Legal Holidays except in case of emergency, and then only with the consent of the Manager. Work may be prosecuted at night if it can be done to the satisfaction of the Manager.

7:03 **LIQUIDATED DAMAGES:**

For each day that the work continues, plant and equipment remains mobilized, and/or beachfront remain unclear from May 25th to September 7th for any calendar year for Sections 3 through 6 in Sea Bright and Section 11A in Monmouth Beach, the Department of Environmental Protection, may withhold from the Contractor's total compensation for the work the sum of ten-thousand (\$10,000.00) dollars, and the amount thus withheld shall not be considered as a penalty but as liquidated damages fixed and agreed to in advance by contracting parties because of the potential ramifications to beach revenue and the difficulty of fixing exact damages, as a proper compensation to the municipalities for the loss, inconvenience, and expense caused by such delay.

S7:00 **STD. REVISED 8/1/57, 8/1/61, 12/13/67, 4/17/69, 4/22/70, 8/18/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 7/20/77, 6/1/79, 6/11/82, 10/1/96, 3/27/08, 11/19/15, 8/17/16**

7:03 **LIQUIDATED DAMAGES Con't:**

For each day after the date of completion stipulated in Section 1:04 of the contract that the work remains incomplete, the Department of Environmental Protection, may withhold from the Contractor's total compensation for the work the sum of one-thousand (\$1,000.00) dollars, and the amount thus withheld shall not be considered as a penalty but as liquidated damages fixed and agreed to in advance by contracting parties because of the potential scheduling and funding ramifications to the future stone seawall project and the difficulty of fixing exact damages, as a proper compensation to the State of New Jersey for the loss, inconvenience, and expense caused it by such delay.

7:04 **STOPPING WORK:**

The Manager may stop any portion of the work if in his judgment the same cannot or is not being properly done for any reason. No allowance of any kind will be made for such stopping except in extension of the time for the completion of the work. No claims shall be made for any stoppage of work arising from environmental concerns as permitted in the specification (beach nesting birds, seabeach amaranth, etc.), except for extension of the time for the completion of the work.

7:05 **CLAIM FOR DELAY:**

At any time during the contract period, the Contractor may submit to the Manager a claim for allowance of additional contract time, expressed in calendar days, to compensate for delay in prosecution of the work due to causes beyond the Contractor's control. Such claims shall be submitted within ten (10) calendar days of the commencement of such delay. Each claim shall describe the delay and its effect on the work; the causes from which the delay arose; the efforts and lack of ability on the Contractor's part to overcome the delay; the actual or projected length of such delay; and the number of calendar days of compensatory time required for such delay. In the case of extended delay, the Contractor shall file a supplementary statement, upon resumption of work, setting forth the total period of delay and requested compensatory number of calendar days. In acceptance the filing of claims, the Office reserves the right to deny any such claims or to approve and fix the compensatory time in each case, such time to be additive to the contract time stated in Section 1:00.

S8:00 **STD. REVISED 8/1/57, 1/1/61, 4/22/70, 1/4/71, 3/29/73, 2/15/74, 11/1/75, 6/1/79, 10/1/96, 8/20/97, 3/27/08**

7:06 **ABANDONMENT OF CONTRACT:**

If at any time the Manager should judge that the work herein described, or any part thereof, has been abandoned, that it is unnecessarily delayed, or that the Contractor is violating any faith, then, in that case, the Manager shall notify the Contractor in writing to discontinue all work under this contract. The Department of Environmental Protection, Office of Engineering and Construction may employ other parties to complete the work in accordance with these specifications and use such equipment and materials as may be found upon the site of aforesaid work, and if necessary, procure other materials, equipment and labor for its completion.

The Department shall recover the cost of the work thus done by deducting the amount thereof out of any moneys which may be due the Contractor, or by an action at Law against the Contractor or his surety, or by either or both of these methods.

8:00 **PAYMENT AND ACCEPTANCE:**

8:01 **PAYMENTS:**

Estimates and partial monthly payment for the work performed during the previous monthly period, in accordance with the terms of the contract, and not previously paid for, will be made on the twentieth (20th) day of each month by the Manager and payment there upon will be made by the Department of Environmental Protection, Office of Engineering and Construction within sixty (60) days thereafter.

Prior to the issuance of a progress payment by the Office to the Contractor, the Contractor shall certify to the state agency that a sub-contractor or supplier has been paid any amount due from any previous progress payment and shall be paid any amount due from the current progress payment or that there exists a valid basis under the terms of the sub-contractor's or supplier's contract to withhold payment from the sub-contractor or supplier and therefore payment is withheld.

If the prime Contractor withholds payment from a sub-contractor or supplier, the prime Contractor shall provide to the sub-contractor or supplier written notice of a withholding of payment. The notice shall detail the reason for withholding payment and state the amount of payment withheld. A copy of the notice shall be provided to the bonding company providing the performance bond for the general Contractor and to the Office.

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3/29/73, 2/15/74, 11/1/75, 6/1/79, 10/1/96, 8/20/97,
3/27/08, 8/17/16**

8:01

PAYMENTS Con't:

The reserved percentage of five (5%) percent of the total amount due monthly, and so reserved from such payment for the work performed under the contract until the work has been completed, will be paid on final completion of the entire work, to the satisfaction of the Manager of the Bureau of Coastal Engineering of the division in charge of the work, and upon presentation by the Contractor of a final certificate signed by the Contractor. Such final certificate shall be the Contractor's signed statement certifying to the Office that all lawful bills, charges and claims for payment whether due or which could become due, for all labor, materials and supplies of every kind in the completed project or employed or used in its construction, including payment for all suppliers and sub-contractors, have been fully paid and discharged, and that the prevailing wage was paid for all labor employed in connection with the work, and that there remain no just liens, claims or demands whether presently asserted or which could become asserted against the work.

The Contractor agrees that as a further condition precedent to the granting of such final certificate, he will furnish said Manager with satisfactory evidence that he has completed the work or furnished materials under this contract for which payment is sought and/or that whoever has sustained damage or injury by reason of any act, omission or carelessness upon its part, or its agents, in the prosecution of the work, has been paid in full or so secured that no liability of any kind or character can attach to the State of New Jersey on account of any claim.

It is specifically understood that in case either greater or lesser quantities under the various work items given herein are required finally to complete the work, the Contractor shall accept final payment for the actual quantity of work performed under each work item at his price or lump sum bid, for such item and shall make no claim for the variation of any anticipated profit, costs, or charges.

8:02

CONDITIONS OF ACCEPTANCE:

It is the intent to accept the completion of work for each individual section as described in the plans and specifications. At any time of final acceptance the whole work must have been finished in a neat and workmanlike manner, and must be in that condition at that time. Defects arising from any cause at any time before acceptance must be made good and the whole work put in a condition as herein specified before acceptance.

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8:02 **CONDITIONS OF ACCEPTANCE Con't:**

After completion of the work, and before final payment is made, the Contractor shall promptly remove his plant, and all appurtenances placed by him under the contract both in the waterways and on the upland and shall leave the site in a clean, uninjured good condition. Any and all piles driven by the Contractor either to support a construction trestle or for any other purpose in connection with the execution of the work shall be removed by the Contractor, prior to final acceptance of each section of work.

All construction materials will receive appropriate inspections and tests as provided elsewhere in these specifications. Final acceptance of materials shall be made only after the incorporation of materials into the finally accepted completed structure.

Upon final acceptance of each section of work, the Contractor shall be relieved of his liabilities for the structure itself, and may release that portion of work from his bonds. However, this shall not relieve him from any potential claims that may arise from the prosecution of work or insurance requirements, and as such, the Contractor shall be held accountable for the investigation and defense of all claims from adjacent property owners for structural or property damages as stated in Section 5:08 (A) & (B).

8:03 **CONTRACT QUANTITIES:**

The Contractor obtaining the award will be paid upon the exact amount of work performed under each work item at the unit price or lump sum at which he bid such work item. It has been the endeavor to estimate the approximate quantity under each item to cover the outside requirements. In case either greater or lessor quantity under the various work items than those given herein for bidding are required to finally complete the work, the Contractor shall accept final payment for the actual quantity of work performed under each work item at his unit price or lump sum bid under that work item, and shall make no claim for the variation or any anticipated profits, costs or charges.

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11:00 (1) TECHNICAL SPECIFICATION:

11:01 ITEM NO. 1 - GENERAL WORK:

The work to be performed shall include, but not be limited to the following:

1. All general, overhead, underwater work, materials, supplies, facilities and expenses not specifically provided for under any other item or sub-items and required to complete the project work as a whole.
2. It is the Contractor's responsibility to locate and protect all underground utilities. If underground utilities not shown on the project plans are found by the contractor, he shall notify the manager or his representative immediately and protect said utilities until direction is given regarding the disposition of the said utilities. **It is the contractor's responsibility to locate and protect all underground utilities within project work area and fully comply with New Jersey's Underground Facility Protection Act.** All known existing utility information is indicated on the Plans.
3. All necessary excavation, clearing, de-watering and preparing of the sites for the proposed structure that's not already provided for under any other item or sub-item, including the removal and disposal of all existing structures, jetties, bulkheads, stumps, logs, concrete, rock or hulks which come within the lines of work, or which interfere with the prosecution of the work. This includes the removal, transportation, and stockpiling of the existing steel sheet pile bulkhead at Section #4 as shown on the Project Plans. The removed sheets are to be transported to and stockpiled at the Bayshore Floodgate facility, access road off of Rose Lane in Union Beach, New Jersey, or approved equal at the direction of the Office Administrator.
4. The construction and removal of all roads, runways and trestles; storage and facilities for protection of the work and construction material, and any other temporary structures or appliances necessary for proper execution of the work.
5. The restoration and repair of any dune structures and dune grass disturbed in any way to their condition prior to the contractor's operations. Dune grass shall conform to Section 25:00 "BEACH GRASS." It is the Contractor's responsibility to visit the site prior to the bid date to determine and assess the area(s) that may require restoration and repair during construction.
6. The restoration and repair of all private and public property and improvements disturbed, damaged, moved or changed in any way to their condition prior to the contractor's operations. This **EXCLUDES** existing timber crossover dismantling and reconstruction, which shall be outlined in separate items.

11:00 (2) TECHNICAL SPECIFICATION:

7. The dismantling of all privately-owned crossover structures that are within the line of work. These crossovers shall be dismantled in sections and preserved to the best of the Contractor's ability. The pieces shall be set aside in a safe location to be determined by the Project Manager. Reassembly will be the responsibility of the owner, and will NOT be required by the Contractor.
8. The removal of all debris, equipment and material created by the contractor's operation, or used by him, from the site of the work.
9. The furnishing of two (2) project signs, as specified in subsection 1:05 and 6:08.
10. Relocating, disconnecting and/or re-routing of the power lines and utility poles which may interfere with the work.
11. The preparation of and implementation of a traffic control, pedestrian through work zone and staging area plan and shall include all furnishing and maintaining of warning signs, signals, barricades, and watchmen, as necessary for the safety and protection of the public, particularly during construction. Also, the work area shall be sufficiently secured during the nighttime hours to prevent against trespassing and possible vandalism.
12. The furnishing and maintaining of a time lapse construction camera at an active work location to be determined by the Project Manager. The camera shall maintain an unobstructed view of the seawall construction alignment and be affixed to a secure structure with sufficient height to prevent damage and theft. The camera shall be a Brinno BCC100 Time Lapse Construction Camera or an approved equal, and include a 32 GB SD Memory Card. The camera and any installed mounting structures and accessories shall be relocated to another active work location as directed by the Project Manager once construction in the original location is complete.
13. All work required under Subsections 11:17 through 11:40.
14. The furnishing and maintaining of a minimum 25 foot wide by 60 foot long project office SOLELY FOR THE FIELD INSPECTOR AND PROJECT MANAGER, at the site of the work, complete with high-speed internet access, wireless router, all-in-one facsimile machine/printer/scanner, one (1) new Panasonic Toughbook 54 rugged laptop computer or approved equal, complete with minimum 2.4 GHz processor, 16 GB of RAM, 500 GB of storage, anti-glare and anti-reflective screen treatments, Windows Version 7 Pro or newer or approved equal, built-in 4G LTE mobile broadband or approved equal, Microsoft Office 2010 edition or newer or approved equal, Adobe Acrobat Pro XI edition or newer or approved equal, 23" wide computer monitor compatible as external display to the laptop, keyboard, and wireless

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11:00 (3) TECHNICAL SPECIFICATION:

mouse. The project office shall also include a water cooler, microwave, refrigerator, indoor toilet and all other furnishings and equipment, as further specified in subsection 4:03 of the Standard Specifications. Telephone, Internet and electrical service shall be connected to the trailer via the utility company servicing the area. NO WORK SHALL BEGIN UNTIL THE PROJECT OFFICE IS HABITABLE AND COMPLETE.

15. The hiring of Police Personnel to control the flow of traffic for deliveries of materials and supplies or as may be required during construction of this project.
16. Haul route roads utilized for the performance of the work under the project by the Contractor shall be pre-approved by the Project Manager and shall be regularly maintained by the Contractor in a safe and satisfactory manner for the duration of the project. The permitted haul route for this Project shall be from Route 36 Northbound ONLY, to the Project Site. Road maintenance shall be performed promptly and as directed by the project manager and shall include, but not be limited to, the filling of pot holes or depressions with cold-mixed bituminous concrete material; and the control of excessive road dust by watering, or applying calcium chloride, or by other means satisfactory to the project manager. The NJDOT has issued a Highway Occupancy Permit for a shoulder closing for Section 1 construction activities. The Contractor will be responsible for reconstructing damaged pavement, curb, guardrail, sidewalks and other facilities damaged by the Contractor's Operations at his own cost to the NJDOT's satisfaction.
17. Attaining all permission, easements and rights of ways for access on to the project area, including access roads to the project site.

11:02 ITEM NO. 2 - SURVEY:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for conducting separate mark-out surveys, as-built surveys, and periodic grade/elevation verification of the project site. Mark-out surveys and as-built surveys shall be prepared by a Professional Land Surveyor licensed in the State of New Jersey.

MARK-OUT SURVEY:

In accordance with Section 12:00 "SURVEYS," in addition to the following:

11:00 (4) TECHNICAL SPECIFICATION:

Mark-out survey shall delineate the proposed work for each section of the stone seawall as shown on the Project Plans.

AS-BUILT SURVEY:

In accordance with Section 12:00 "SURVEYS," in addition to the following:

As-built survey shall include, but not be limited to: seawall alignment, crest elevation, landward and seaward slope, site grades and limits of disturbance, and adjacent structures, roads, bridges, bulkheads, boardwalks, crossovers as necessary to properly depict the newly rehabilitated and constructed sections of seawall and adjacent areas. As-built limits will not be required to extend beyond the mean high water line. Hydrographic surveys will NOT be a requirement for this project.

NOTE: Section 12:00 – Surveys is a general specification utilized to describe all types of survey work required by the Office. Pre-construction surveys, as mentioned in Section 12:00, are NOT required under this contract.

MARK-OUT AND AS-BUILT SUBMITTALS:

In accordance with Section 12:00 "SURVEYS."

PERIODIC GRADE/ELEVATION VERIFICATION:

As directed by the Project Manager or his representative during construction. This shall include providing spot elevations in NAVD88 throughout construction for bottom of excavation, top of bedding stone layer, top of core stone layer, and crest elevation for sections of the project that entail constructing new seawall and adding a seaward toe. The Contractor shall ensure the elevation of the bottom of excavation and each layer of stone adequately compensates for settlement to ultimately conform to the proposed cross sections as depicted on the Project Plans before the next layer of seawall is constructed.

PERIODIC GRADE/ELEVATION VERIFICATION SUBMITTALS:

No submittals shall be required for periodic grade/elevation verification. Elevations provided in the field to the Project Manager or his representative will be cross-referenced with the Project Plans for grade/elevation verification.

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11:00 (5) TECHNICAL SPECIFICATION:

11:03 ITEM NO. 3 – STRUCTURE MONITORING:

The work under this item is to be bid upon and executed on a lump sum basis and shall include all labor, materials and equipment, and performing all operations required to monitor structures for potential effects of the contract work.

METHODS AND SUBMITALS:

In accordance with Section 24:00 "STRUCTURE MONITORING."

11:04 SECTION #1: SEA BRIGHT; NORTH BEACH SEAWALL REHAB:

The work under this section includes the reconstruction of approximately 1,189 linear feet of stone seawall which includes, but is not limited to: Adding additional stone to raise the elevation of the wall to +18.0 NAVD88, adding a seaward toe if one does not already exist, rehandling of the existing stone, grouting the top and landward face of the reconstructed wall, reconstructing the concrete splash pad on the landward side of the seawall if damaged during construction, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 4.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 4.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

11:00 (6) TECHNICAL SPECIFICATION:

ITEM NO. 4.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 4.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 4.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 28:00 "GEOTEXTILE."

ITEM NO. 4.6 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 4.7 – GROIN SEALING:

In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 4.8 – CONCRETE SPLASH PAD:

- (A) Concrete Splash Pad Demolition:** In accordance with Section 1:02.viii.A of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

No specific materials are required to conduct this work. All plant and equipment including any containers required to legally dispose of concrete debris shall be accounted for in this bid item.

Prior to the start of demolition, the contractor shall be required to meet onsite with the project manager to discuss the exact limits defined in the field. All demolition materials must be removed from the site and disposed of in a lawful manner.

- (B) Concrete Splash Pad Reconstruction:** The work under this item is to be bid upon and executed at a unit price per square yard, and shall include all labor, materials, equipment, rigging, tools, and accessories required to reconstruct the damaged portions of concrete splash pad throughout this section as directed by the Project Manager, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 405 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein. This item shall include all concrete, reinforcement, anchors, drilling and grouting, labor and all materials complete and in place as shown on the project plans.

All reinforcement shall be corrosion protected.

The epoxy grout shall be selected off the NJDOT's approved materials list and submitted for review and approval by the engineer.

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11:00 (8) TECHNICAL SPECIFICATION:

11:05 SECTION #2: SEA BRIGHT; ANCHORAGE SEAWALL REPAIR (IF AND WHERE DIRECTED):

The work under this section includes the repair of approximately 273 linear feet of stone seawall which includes, but is not limited to: Rehandling and resetting of the existing cap stone along the crest and seaward face of the wall, and grout work to seal the crest and landward face of the wall where deemed necessary by the Project Manager, as well as other appurtenant items necessary to complete the work.

Note: All work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 5.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 5.2 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 5.3 – GROIN SEALING:

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

No submittals are required for this bid item. Removed groin sealing shall be disposed of in a legal manner offsite.

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11:00 (9) TECHNICAL SPECIFICATION:

(B) New Groin Sealing: In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

11:06 SECTION #3: SEA BRIGHT; NORTHERN MUNICIPAL LOT SEAWALL REHAB:

The work under this section includes the reconstruction of approximately 517 linear feet of stone seawall and the construction of various appurtenant items which includes, but is not limited to: Adding additional stone to raise the elevation of the wall to +18.0 NAVD88, adding a seaward toe if one does not already exist, rehandling of the existing stone, grouting the top and landward face of the reconstructed wall, constructing a vehicular crossover structure up and over the reconstructed wall, converting the contractor staging area to a gravel parking lot post-construction, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 6.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 6.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

11:00 (10) TECHNICAL SPECIFICATION:

ITEM NO. 6.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 6.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 6.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 28:00 "GEOTEXTILE."

ITEM NO. 6.6 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 6.7 – GROIN SEALING:

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 20:00 "STANDARDS FOR GROIN SEALING"

- (A) **New Groin Sealing:** In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 6.8 – GRAVEL STAGING AREA

- (A) **Gravel Staging Area:** The work under this item is to be bid upon and executed at a unit price per square yard for Gravel Staging Area, and shall include all labor, equipment, rigging, tools, and accessories required to excavate, grade, and construct the gravel parking area within Section 3, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

No. 8 Stone Surface Course – 2" thick:

In accordance with Section 302 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Dense Graded Aggregate Base Course – 8" thick:

In accordance with Section 302 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Filter Fabric:

In accordance with Section 28:00 "GEOTEXTILE."

Excavation:

In accordance with Section 32:00 "EXCAVATION."

- (B) **Concrete Curb:** The work under this item is to be bid upon and executed at a unit price per linear foot basis, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete vertical curb within Section 3 which will surround the future gravel parking area, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 607 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, with the following exceptions:

1. Excavation and grading shall be done by hand or with suitable equipment which will not disturb the subgrade.
2. Concrete curb shall be formed to the dimensions, lines and grades provided on the Drawings or as directed by the engineer. Forms shall be placed to the required grades and set to provide a straight or uniformly curved curb alignment.
3. The concrete curb shall be constructed in sections not to exceed 10 feet in length. An expansion joint shall be constructed at maximum intervals of 20 feet.

- (C) Concrete Driveway, 6" Thick:** The work under this item is to be bid upon and executed at a unit price basis per square yard, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete driveways within Section 3 complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 606 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 6.9 – VEHICULAR CROSSOVER CONSTRUCTION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to construct the vehicular crossover structure within Section 3, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, Precast Concrete Retaining Wall (landward side), the additional excavation, filter fabric, and jetty stone necessary to construct the seaward ramp, 8" Thick Concrete Surface Course, Steel Backed Timber Guiderail, Backfill, and all other items necessary for construction.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Precast Concrete Retaining Wall

In accordance with Section 513 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, with the following exceptions:

1. This item shall include all excavation, backfill, concrete foundation, filter fabric, formliner, staining, labor and materials complete and in place as shown on the project plans.
2. The front face of the T-wall shall have a formliner finish. The formliner liner pattern shall be of medium to large cut ashlar stone, 1-1/2" to 2" maximum reveal.
3. The formliner shall be RE Ashlar, Pattern Number 1523 manufacture by Spec Formliners, Inc. or approved equal.
4. A multi-color stain shall be applied to the finished surfaced. A minimum of four colors shall be utilized shall be provided a natural stone look. Use an acrylic resin-based or acid-based color stain formulated to penetrate finished concrete surface, creating a surface finish that will allow water vapor transmission and resist deterioration from water, acid, alkali, fungi and sunlight. Stain shall be acceptable to marine environments.
5. A 4'x4' sample concrete casting with the selected formliner and stain shall be provided to the owner. The owner shall approve the casting sample, stain pattern and color before any T-Wall components are cast. The owner may request up to three additional samples be cast with different formliners and/or color stains for review and approval.

Jetty Stone

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE," with the following exceptions:

1. This stone required to construct the seaward side of the vehicular crossover structure shall be considered separate from the stone required to construct the seawall to the template in Typical Cross Section B-2, as shown on the Project Plans. Only the additional stone necessary to construct the seaward side of the vehicular crossover structure in Typical Cross Section C shall be factored into the Vehicle Crossover Construction pay item.
2. All stone required to construct this item shall be tied into the adjacent seawall and maintain consistent interlock as specified in the Project Plans and Section 19:00 "STANDARDS FOR JETTY STONE."

Concrete Surface Course, 8" Thick

In accordance with Section 405 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, with the following exceptions:

1. This item shall include all concrete, reinforcement, anchors, drilling and grouting, labor and all materials complete and in place as shown on the project plans.
2. All reinforcement shall be corrosion protected.
3. The epoxy grout shall be selected off the NJDOT's approved materials list and submitted for review and approval by the engineer.

Steel Backed Timber Guiderail

In accordance with Section 609 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, with the following exceptions:

1. Work of this item includes anchor bolts, steel base plates, steel posts, timber rails, steel back plates, timber blocking and all other items necessary for construction, complete and in place as shown on the project plans.
2. Steel Backed Timber Guiderail shall conform to section 617 of the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-14.
3. Steel Backed Timber Guiderail shall be manufactured by Cor-Tenn, or approved equal.
4. All steel members shall be painted in accordance with Section 906.06 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein. The color shall be brown to match Federal Chip Number 30111.

Regulatory & Warning Signs

In accordance with Section 612 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

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11:00 (15) TECHNICAL SPECIFICATION:

11:07 SECTION #4: SEA BRIGHT; SOUTHERN MUNICIPAL LOT GAP SEAWALL CONSTRUCTION:

The work under this section includes the construction of approximately 339 linear feet of new stone seawall and the construction of various appurtenant items which includes, but is not limited to: Constructing a new stone seawall to bridge the gap in the existing stone seawall between the River Street entrance and the south end of the Municipal Lot, grouting the top and landward face of the new seawall, incorporating the existing stockpiled stone located at the north end of the Municipal Lot into the seawall where the Contractor sees fit, constructing pedestrian crossover staircases and ADA ramps up and over the new seawall, various parking lot reconstruction work including the construction of a new concrete sidewalk, and other appurtenant items necessary to complete the work.

Note: The proposed ADA access ramp at the south end of the Municipal Lot and removal of the existing steel sheet pile bulkhead as shown on the project plans are NOT included under this section. They are included under Item 8 (Section 5) and General Work, respectively.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 7.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 7.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 7.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

11:00 (16) TECHNICAL SPECIFICATION:

ITEM NO. 7.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 7.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 28:00 "GEOTEXTILE."

ITEM NO. 7.6 – REHANDLED STOCKPILED STONE:

The work under this item is to be bid upon and executed at a unit price per ton of Rehandled Stone, and shall include all labor, materials, equipment, rigging, tools, and accessories required to clean, sort, inspect, temporarily stockpile at an upland, onsite location, and permanently place the existing stockpiled stone currently located within the Section 3 Staging Area alongside the north end of the Municipal Lot, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE," with the following exceptions:

All stones from the existing on-site stockpile shall be sorted and classified per the ranges specified in Section 19:00 of the Specifications and on the Project Plans. Any stones larger than the maximum size specified for Armor Cap Stone shall still be incorporated into the seawall to the best of the Contractor's ability where the Contractor sees fit. Any additional cost associated with handling the larger stone shall be incorporated into the Contractor's unit price for this particular bid item. Stone from the existing on-site stockpile may also be incorporated into other Sections of the Project at the Contractor's discretion and the cost of doing so shall still be incorporated into the bid price for this work item. It is strongly recommended that all prospective bidders visit the site to inspect the size of the stones within the existing stockpile.

11:00 (17) TECHNICAL SPECIFICATION:

ITEM NO. 7.7 – GROIN SEALING:

In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 7.8 – PARKING LOT RECONSTRUCTION:

(A) Mill & Overlay: The work under this item is to be bid upon and executed at a unit price per square yard, and shall include all labor, materials, equipment, rigging, tools, and accessories required for all asphalt milling and construction work associated with the reconstruction of the existing parking lot within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, HMA Milling to an average depth of 2", 2" thick HMA 9.5M64 Surface Course, tack coat, polymerized joint adhesive, grading, compacting, and all other items necessary for construction.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Materials:

In accordance with Division 902 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Tack coat materials shall be cutback asphalt, Grade RC-70 in accordance with the NJDOT specifications.

Methods:

In accordance with Section 401 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

The Contractor shall restore unpaved areas to the conditions that existed prior to commencement of work. Any mailboxes, signs, shrubs, ground cover, etc. removed during the construction shall be replaced and restored to its original condition.

- (B) Asphalt:** The work under this item is to be bid upon and executed at a unit price per square yard, and shall include all labor, materials, equipment, rigging, tools, and accessories required for all new asphalt work associated with the reconstruction of the existing parking lot within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, 6" thick dense graded aggregate base course, 4" thick HMA 19M64 Base Course, 2" thick HMA 9.5M64 Surface Course, tack coat, prime coat, polymerized joint adhesive, excavation, grading, compacting, and all other items necessary for construction.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Materials:

In accordance with Division 902 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Tack coat materials shall be cutback asphalt, Grade RC-70 in accordance with the NJDOT specifications.

Methods:

In accordance with Section 401 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

The Contractor shall restore unpaved areas to the conditions that existed prior to commencement of work. Any mailboxes, signs, shrubs, ground cover, etc. removed during the construction shall be replaced and restored to its original condition.

- (C) Striping:** The work under this item is to be bid upon and executed at a unit price per linear foot, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the application of long life thermoplastic traffic markings atop the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 610 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

- (D) **Concrete Curb:** The work under this item is to be bid upon and executed at a unit price per linear foot, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete vertical curb which will surround the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 607 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, with the following exceptions:

1. Excavation and grading shall be done by hand or with suitable equipment which will not disturb the subgrade.
2. Concrete curb shall be formed to the dimensions, lines and grades provided on the Drawings or as directed by the engineer. Forms shall be placed to the required grades and set to provide a straight or uniformly curved curb alignment.
3. The concrete curb shall be constructed in sections not to exceed 10 feet in length. An expansion joint shall be constructed at maximum intervals of 20 feet.

- (E) **Concrete Sidewalk:** The work under this item is to be bid upon and executed at a unit price per square yard, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete sidewalk between the proposed section of seawall and proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, all concrete, reinforcement, formwork, 4" thick crushed stone base course, 4" thick concrete sidewalk, and all other items necessary for construction.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 606 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

- (F) **Regulatory and Warning Signs:** The work under this item is to be bid upon and executed at a unit price per square foot, and shall include all labor, equipment, rigging, tools, and accessories required to install post-mounted signage designating handicap-accessible parking spaces within the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Materials:

In accordance with Section 911 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Methods:

In accordance with Section 612 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 7.9 – PAVILION PEDESTRIAN BEACH ACCESS:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to construct the Pavilion pedestrian beach access structures within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, the furnishing, fabrication, and erection of all timbers and associated materials, including the timber piles, posts, joists, pickets, face beams, header beams, and decking; stainless-steel pipe and tube railings; concrete sidewalk and miscellaneous concrete; and all other items necessary for construction.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with the specifications titled, "Ocean Front Pavilion – Ramps and Deck, 1167 Ocean Avenue, Sea Bright, Monmouth County, New Jersey" prepared by Settembrino Architects, identified as SA Project 13.142, dated July 2016 as amended herein.

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11:00 (21) TECHNICAL SPECIFICATION:

11:08 SECTION #5: SEA BRIGHT; LIFEGUARD BUILDING TO SURF ST - SEAWALL REHAB:

The work under this section includes the reconstruction of approximately 351 linear feet of stone seawall and the construction of various appurtenant items which includes, but is not limited to: Adding additional stone to raise the elevation of the wall to +18.0 NAVD88, adding a seaward toe if one does not already exist, rehandling of the existing stone, grouting the top and landward face of the reconstructed wall, reconstructing the existing timber boardwalk including stairs and ADA access, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 8.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 8.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 8.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 8.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

11:00 (22) TECHNICAL SPECIFICATION:

ITEM NO. 8.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 28:00 "GEOTEXTILE."

ITEM NO. 8.6 – REHANDLED STONE:

The work under this item is to be bid upon and executed at a unit price per ton of Rehandled Stone, and shall include all labor, materials, equipment, rigging, tools, and accessories required to excavate, extract, clean, sort, inspect, temporarily stockpile at an upland, onsite location, and permanently place the stone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

Note: The existing stone throughout the top layer of seawall in this section varies in size and classification. Each stone shall be classified in accordance with section 19:02.3a of the Jetty Stone Specifications and rehandled/reset into the appropriate layer of the reconstructed seawall.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 8.7 – GROIN SEALING:

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 20:00 "STANDARDS FOR GROIN SEALING"

(B) New Groin Sealing: In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 8.8 – TIMBER BOARDWALK RECONSTRUCTION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the complete reconstruction of the timber boardwalk within southernmost end of Section 4 and the beginning of Section 5, as well as stairs and ADA access ramps, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This work shall be executed as specified in Section 510, Section 504 and Section 502 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein. The work for the various timber boardwalk construction shall consist of but not limited to: the furnishing, fabrication, and erection of all timbers and associated materials, including the timber joists, timber posts, pickets, face beams, header beams, decking as directed by the engineer or as shown on the plans, plank deck, necessary galvanized timber connecting hardware (such as nails, screws, lag bolts, nuts and washers, tie rods, plates, hangers, angles, etc.), cross bracing, piles, steel sleeves, attachments, concrete, reinforcement, drilling and grouting, and all other work associated with the timber boardwalk as shown on the project plans, complete and in place. This Section also describes the requirements for constructing timber boardwalks with associated timber ramps, timber railings, ADA compliant railing sections, timber decking, timber stairs and landings.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Materials:

Materials shall conform to Section 903, 905, 906, 908 and 915, of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, unless otherwise specified.

Timber decking shall be secured to timber joists with stainless steel wood screws. Stainless steel screws shall be "Bugle Head Wood Screws" as manufactured by Sea-Sure, or approved equal.

The plates, angles nuts, bolts, washers and all other hardware for the connections below the timber decking shall be of hot dipped galvanized steel. The galvanizing shall not be damaged during transportation, storage or construction. All damage to the galvanizing shall be repaired in accordance to these specifications

Galvanizing for Connectors: ASTM A123 minimum 2.0 oz/sq ft coating thickness; galvanize after fabrication.

Galvanizing for Nuts, Bolts and Washers: ASTM A153.

All handrails shall include mounting brackets, hardware, all rails, posts, handrails at stairs and ramps, reinforcing, miscellaneous parts and fittings complete, in place, as shown on the project plans.

Handrails at Stairs and Ramps:

All stairs and ramps shall be provided with stainless steel handrails. All handrails shall include stainless steel rails, mounting brackets, hardware, miscellaneous parts and fittings as shown on the project plans and as per manufacturer's recommendations, complete and in place.

All rails, posts and elbows shall be 1-1/2" schedule 40, type 304, ornamental grade, stainless steel tubing conforming to ASTM A554. Railing shall be factory fabricated in complete sections ready for installation at the work site. Bends in the railings shall be smooth and made in a manner that will not crush or deform the railing. All welds shall be ground smooth and railing shall be free of burrs and sharp corners and edges. Welds shall be cleaned and blended to match the finish of the railing.

Style shall match existing adjacent railing.

Provide shop drawings for approval prior to fabrication. Handrails shall be installed as shown on approved drawings, as modified by actual field dimensions, in accordance with the manufacturer's recommendations. Work shall be performed according to approved shop drawings by workmen experienced in the fabrication and erection of stainless steel handrails.

Construction:

Working Drawings: The Contractor shall field verify all existing dimensions and elevations prior to preparing shop drawings

Shop Drawings for the timber boardwalk shall then be submitted in accordance with Section 105 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

The drawings shall show at a minimum: the field verified dimensions, elevations, associated connections details, and the connector hardware to be used.

The existing dimensions and elevations of the timber structures to be constructed shall be field verified at the earliest possible time and shown in submitted shop drawings. Shop drawings shall be approved by the Engineer prior to ordering materials. All materials ordered by the contractor prior to this point are solely at the contractor's risk. The timber materials shall be then ordered as soon as possible in the project

in order to avoid fabrication delays due to long lead times which may delay the project.

General Timber Construction:

The construction of the various timber boardwalk including the furnishing, preparing, fabricating, erecting, treating, and painting of the Timber shall conform to Sections 510 and 915 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein:

Pilot holes shall be drilled prior to installing screws and bolts in the timber members. Nails shall be driven with sufficient force to set the heads flush with the surface of the wood. Deep hammer marks in wood surfaces may be cause for rejection. All cutting, framing and boring of treated timbers shall be done before treatment.

Timbers shall be handled without dropping, breaking of outer fibers, bruising or penetrating the surface with tools. They shall be handled with rope slings. Cant hooks, peaveys, pikes or hooks shall not be used.

When field fabrication of timber is required, all cuts and bore holes shall be immediately field treated in accordance with AWPA standard M4. Connectors shall be of corrosion-resistant metal.

Set structural timber framing level and plumb, in correct position. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in indicated alignment until completion of erection and installation of permanent bracing.

Do not field cut or alter structural members without approval of Engineer.

After erection, touch-up galvanized surfaces with zinc primer.

Test Piles

Test piles of the specified materials, dimensions, and at the designated locations shall be furnished and driven with an impact hammer unless specifically stated otherwise in the Special Provisions or on the plans. In general, lengths of test piles will be greater than the estimated length of production piles to provide for variation in soil conditions. The driving equipment and procedure (criteria) used for driving test piles shall be identical to that which the Contractor proposes to use on the production piles. Test piles shall be driven at the designated locations to the bearing capacity and tip elevation that is shown on the Plans. The Engineer shall be the sole judge in determining bearing capacity and the length of pile to be driven.

Dynamic Pile Load Tests

Monitoring of all test piles with PDA shall be performed during the full length of driving and, if restrrike is required, during restrrike.

The contractor shall drive the test piles and production piles designated for PDA to the depth at which the required ultimate bearing capacity has been achieved provided that the minimum tip elevations has been achieved, unless directed otherwise by the Engineer. All test piles shall be restruck. PDA monitoring shall be performed during the restrrike. If the required ultimate bearing capacity is not achieved during initial driving by a depth of 5 feet below the minimum tip elevation the initial driving shall cease. The Contractor shall wait for a minimum period of 24 hours after initial driving and the pile shall be restruck either to verify that capacity has been obtained or to achieve capacity for those piles not achieving capacity during the initial driving.

If signification relaxation occurs, the Contractor, at the direction of the RE, may require additional waiting periods and restrikes. Based on the results, the RE shall determine whether restrrike(s) will be required for production piles.

Additional piles may require monitoring by PDA as directed by the Engineer. Production piles shall not be ordered until PDA reports are reviewed and accepted by the Engineer. Additional PDA monitoring required by the Engineer, due to unacceptable results, as determined by the engineering shall be performed by the Contractor at no expense.

Production Piles

Piles shall be furnished in accordance with an order list based on results obtained from driving test piles and on other geotechnical information, when available. Said order list will be approved by the Engineer, but shall be prepared by the Contractor. Said list shall not be prepared until all test piles are driven. Test piles shall be driven as early in the project as possible so as to minimize delays that could be caused by long lead times sometimes associated with obtaining production piles. The lengths of bearing piles shown on the plans are for estimating purposes only and are subject to variation based on results of test piles.

The Contractor may increase the length of the production piles to be furnished to provide fresh heading or to suit the Contractor's method at no additional cost.

Concrete

All concrete work shall be in accordance with Section 504 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Epoxy grout shall be PE1000+ manufactured by Powers Fasteners or approved equal.

4265-15

11:00 (27) TECHNICAL SPECIFICATION:

11:09 SECTION #6: SEA BRIGHT; BOROUGH HALL SEAWALL REHAB:

The work under this section includes the partial reconstruction of approximately 461 linear feet of stone seawall and the reconstruction of various appurtenant items which includes, but is not limited to: Adding a seaward toe if one does not already exist, rehandling of stone along the seaward face of the wall, grout repair work along the top and landward face of the reconstructed wall if directed by the Project Manager, reconstruction of the pedestrian crossover staircase, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 9.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 9.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 9.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 9.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

The total estimated quantity for this bid item is eight hundred (800) tons.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

11:00 (28) TECHNICAL SPECIFICATION:

ITEM NO. 9.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 28:00 "GEOTEXTILE."

ITEM NO. 9.6 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 9.7 – GROIN SEALING (IF AND WHERE DIRECTED):

- (A) Groin Sealing Removal:** In accordance with Section 1:02.vii.A of the Project Description.

Note: The grout work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 20:00 "STANDARDS FOR GROIN SEALING"

- (B) New Groin Sealing:** In accordance with Section 1:02.vii.B of the Project Description.

Note: The grout work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 9.8 – PEDESTRIAN CROSSOVER RECONSTRUCTION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the complete reconstruction of the timber crossover within Section 6, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This work shall be executed as specified in Section 510, Section 504 and Section 502 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein. The work for the various timber crossover construction shall consist of but not limited to: the furnishing, fabrication, and erection of all timbers and associated materials, including the timber joists, timber posts, pickets, face beams, header beams, decking as directed by the engineer or as shown on the plans, plank deck, necessary galvanized timber connecting hardware (such as nails, screws, lag bolts, nuts and washers, tie rods, plates, hangers, angles, etc.), cross bracing, piles, steel sleeves, attachments, concrete, reinforcement, drilling and grouting, and all other work associated with the timber crossover as shown on the project plans, complete and in place. This Section also describes the requirements for constructing timber crossover with associated timber ramps, timber railings, ADA compliant railing sections, timber decking, timber stairs and landings.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Materials:

Materials shall conform to Section 903, 905, 906, 908 and 915, of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, unless otherwise specified.

Timber decking shall be secured to timber joists with stainless steel wood screws. Stainless steel screws shall be "Bugle Head Wood Screws" as manufactured by Sea-Sure, or approved equal.

The plates, angles nuts, bolts, washers and all other hardware for the connections below the timber decking shall be of hot dipped galvanized steel. The galvanizing shall not be damaged during transportation, storage or construction. All damage to the galvanizing shall be repaired in accordance to these specifications

Galvanizing for Connectors: ASTM A123 minimum 2.0 oz/sq ft coating thickness; galvanize after fabrication.

Galvanizing for Nuts, Bolts and Washers: ASTM A153.

All handrails shall include mounting brackets, hardware, all rails, posts, handrails at stairs and ramps, reinforcing, miscellaneous parts and fittings complete, in place, as shown on the project plans.

Handrails at Stairs and Ramps:

All stairs and ramps shall be provided with stainless steel handrails. All handrails shall include stainless steel rails, mounting brackets, hardware, miscellaneous parts and fittings as shown on the project plans and as per manufacturer's recommendations, complete and in place.

All rails, posts and elbows shall be 1-1/2" schedule 40, type 304, ornamental grade, stainless steel tubing conforming to ASTM A554. Railing shall be factory fabricated in complete sections ready for installation at the work site. Bends in the railings shall be smooth and made in a manner that will not crush or deform the railing. All welds shall be ground smooth and railing shall be free of burrs and sharp corners and edges. Welds shall be cleaned and blended to match the finish of the railing.

Style shall match existing adjacent railing.

Provide shop drawings for approval prior to fabrication. Handrails shall be installed as shown on approved drawings, as modified by actual field dimensions, in accordance with the manufacturer's recommendations. Work shall be performed according to approved shop drawings by workmen experienced in the fabrication and erection of stainless steel handrails.

Construction:

Working Drawings: The Contractor shall field verify all existing dimensions and elevations prior to preparing shop drawings

Shop Drawings for the timber crossover shall then be submitted in accordance with Section 105 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

The drawings shall show at a minimum: the field verified dimensions, elevations, associated connections details, and the connector hardware to be used.

The existing dimensions and elevations of the timber structures to be constructed shall be field verified at the earliest possible time and shown in submitted shop drawings. Shop drawings shall be approved by the Engineer prior to ordering materials. All materials ordered by the contractor prior to this point are solely at the contractor's risk. The timber materials shall be then ordered as soon as possible in the project in order to avoid fabrication delays due to long lead times which may delay the project.

General Timber Construction:

The construction of the various timber crossover including the furnishing, preparing, fabricating, erecting, treating, and painting of the Timber shall conform to Sections 510 and 915 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein:

Pilot holes shall be drilled prior to installing screws and bolts in the timber members. Nails shall be driven with sufficient force to set the heads flush with the surface of the wood. Deep hammer marks in wood surfaces may be cause for rejection. All cutting, framing and boring of treated timbers shall be done before treatment.

Timbers shall be handled without dropping, breaking of outer fibers, bruising or penetrating the surface with tools. They shall be handled with rope slings. Cant hooks, peaveys, pikes or hooks shall not be used.

When field fabrication of timber is required, all cuts and bore holes shall be immediately field treated in accordance with AWWA standard M4. Connectors shall be of corrosion-resistant metal.

Set structural timber framing level and plumb, in correct position. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in indicated alignment until completion of erection and installation of permanent bracing.

Do not field cut or alter structural members without approval of Engineer.

After erection, touch-up galvanized surfaces with zinc primer.

Test Piles:

Test piles of the specified materials, dimensions, and at the designated locations shall be furnished and driven with an impact hammer unless specifically stated otherwise in the Special Provisions or on the plans. In general, lengths of test piles will be greater than the estimated length of production piles to provide for variation in soil conditions. The driving equipment and procedure (criteria) used for driving test piles shall be identical to that which the Contractor proposes to use on the production piles. Test piles shall be driven at the designated locations to the bearing capacity and tip elevation that is shown on the Plans. The Engineer shall be the sole judge in determining bearing capacity and the length of pile to be driven.

Dynamic Pile Load Tests:

Monitoring of all test piles with PDA shall be performed during the full length of driving and, if restrrike is required, during restrrike.

The contractor shall drive the test piles and production piles designated for PDA to the depth at which the required ultimate bearing capacity has been achieved provided that the minimum tip elevations has been achieved, unless directed otherwise by the Engineer. All test piles shall be restruck. PDA monitoring shall be performed during the restrike. If the required ultimate bearing capacity is not achieved during initial driving by a depth of 5 feet below the minimum tip elevation the initial driving shall cease. The Contractor shall wait for a minimum period of 24 hours after initial driving and the pile shall be restruck either to verify that capacity has been obtained or to achieve capacity for those piles not achieving capacity during the initial driving.

If signification relaxation occurs, the Contractor, at the direction of the Engineer, may require additional waiting periods and restrikes. Based on the results, the Engineer shall determine whether restrike(s) will be required for production piles.

Additional piles may require monitoring by PDA as directed by the Engineer. Production piles shall not be ordered until PDA reports are reviewed and accepted by the Engineer. Additional PDA monitoring required by the Engineer, due to unacceptable results, as determined by the engineering shall be performed by the Contractor at no expense.

Production Piles:

Piles shall be furnished in accordance with an order list based on results obtained from driving test piles and on other geotechnical information, when available. Said order list will be approved by the Engineer, but shall be prepared by the Contractor. Said list shall not be prepared until all test piles are driven. Test piles shall be driven as early in the project as possible so as to minimize delays that could be caused by long lead times sometimes associated with obtaining production piles. The lengths of bearing piles shown on the plans are for estimating purposes only and are subject to variation based on results of test piles.

The Contractor may increase the length of the production piles to be furnished to provide fresh heading or to suit the Contractor's method at no additional cost.

Concrete:

All concrete work shall be in accordance with Section 504 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Epoxy grout shall be PE1000+ manufactured by Powers Fasteners or approved equal.

4265-15

11:00 (33) TECHNICAL SPECIFICATION:

11:10 SECTION #7: SEA BRIGHT; DONOVAN'S TO VILLAGE RD SEAWALL REPAIR (IF AND WHERE DIRECTED):

The work under this section includes miscellaneous grout repair at various areas along approximately 926 linear feet of stone seawall which includes, but is not limited to: Grout work to seal the crest and landward face of the wall and the installation of concrete bags to fill existing voids in the seawall where deemed necessary by the Project Manager, as well as other appurtenant items necessary to complete the work.

Note: All work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 10.1 – GROIN SEALING:

- (A) Groin Sealing Removal:** In accordance with Section 1:02.vii.A of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 20:00 "STANDARDS FOR GROIN SEALING"

- (B) New Groin Sealing:** In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 10.2 – CONCRETE BAG REPAIRS:

The work under this item is to be bid upon and executed at a unit price per cubic yard for concrete filled bags (if and where directed), and shall include all labor, equipment, rigging, tools, and accessories required to fill the voids, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 33:00 "STANDARDS FOR CONCRETE BAG REPAIRS"

4265-15

11:00 (34) TECHNICAL SPECIFICATION:

11:11 SECTION #8: SEA BRIGHT; TRADEWINDS GAP SEAWALL CONSTRUCTION:

The work under this section includes the construction of approximately 20 linear feet of new stone seawall which includes, but is not limited to: Constructing a new stone seawall to bridge the gap in the existing stone seawall adjacent to the residential community of Tradewinds, grouting the top and landward face of the new seawall, and transitioning the new seawall into existing, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 11.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 11.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 11.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 11.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

4265-15

11:00 (35) TECHNICAL SPECIFICATION:

ITEM NO. 11.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 28:00 "GEOTEXTILE."

ITEM NO. 11.6 – GROIN SEALING:

In accordance with Section 1:02.vii.B of the Project Description.

The total estimated quantity for this bid item is twelve (12) cubic yards of groin sealing.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

11:12

SECTION #9: MONMOUTH BEACH; NORTH BEACH SPLASH PAD REPAIR (IF AND WHERE DIRECTED):

The work under this section includes the repair and reconstruction of the existing splashpad at various areas along approximately 4,230 linear feet of concrete splashpad where deemed necessary by the Project Manager, as well as other appurtenant items necessary to complete the work.

Note: All work throughout this section is to be executed on an "if and where" basis, as directed by the Project Manager.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 12.1 – CONCRETE SPLASH PAD:

(A) Concrete Splash Pad Demolition: In accordance with Section 1:02.viii.A of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

No specific materials are required to conduct this work. All plant and equipment including any containers required to legally dispose of concrete debris shall be accounted for in this bid item.

4265-15

11:00 (36) TECHNICAL SPECIFICATION:

Prior to the start of demolition, the contractor shall be required to meet onsite with the project manager to discuss the exact limits defined in the field. All demolition materials must be removed from the site and disposed of in a lawful manner.

- (B) Concrete Splash Pad Reconstruction:** In accordance with Section 1:02.viii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 405 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein. This item shall include all concrete, reinforcement, anchors, drilling and grouting, labor and all materials complete and in place as shown on the project plans.

All reinforcement shall be corrosion protected.

The epoxy grout shall be selected off the NJDOT's approved materials list and submitted for review and approval by the engineer.

11:13

SECTION #10: MONMOUTH BEACH; VISTA CT - SEAWALL REHAB:

The work under this section is located, for reference purposes, approximately in line with Vista Court across Ocean Avenue, and includes the partial reconstruction of approximately 100 linear feet of stone seawall which includes, but is not limited to: Rehandling of stone along the seaward face of the wall in order to fill the large cavern/void which has formed in the seawall, grouting the top and landward face of the reconstructed wall, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 13.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

4265-15

11:00 (37) TECHNICAL SPECIFICATION:

ITEM NO. 13.2 – REHANDLED ARMOR CAP STONE:

In accordance with Section 1:02.vi of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 13.3 – GROIN SEALING:

(A) Groin Sealing Removal: In accordance with Section 1:02.vii.A of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 20:00 "STANDARDS FOR GROIN SEALING"

(B) New Groin Sealing: In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

11:14

SECTION #11: MONMOUTH BEACH; SOUTH OF BATHING PAVILION - SEAWALL REPAIR (IF AND WHERE DIRECTED):

The work under this section includes miscellaneous grout repair at various areas along approximately 753 linear feet of stone seawall which includes, but is not limited to: Grout work to seal the crest and landward face of the wall and the installation of concrete bags to fill existing voids in the seawall where deemed necessary by the Project Manager, as well as other appurtenant items necessary to complete the work.

Note: All work throughout this section is to be constructed on an "if and where" basis, as directed by the Project Manager.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

11:00 (38) TECHNICAL SPECIFICATION:

ITEM NO. 14.1 – GROIN SEALING:

- (A) Groin Sealing Removal:** In accordance with Section 1:02.vii.A of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 20:00 "STANDARDS FOR GROIN SEALING"

- (B) New Groin Sealing:** In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 14.2 – CONCRETE BAG REPAIRS:

The work under this item is to be bid upon and executed at a unit price per cubic yard for concrete filled bags (if and where directed), and shall include all labor, equipment, rigging, tools, and accessories required to fill the voids, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 33:00 "STANDARDS FOR CONCRETE BAG REPAIRS"

4265-15

11:00 (39) TECHNICAL SPECIFICATION:

11:15 SECTION #11A: MONMOUTH BEACH; BATHING PAVILION GAP SEAWALL CONSTRUCTION:

The work under this section includes the construction of approximately 630 linear feet of new stone seawall and the construction of various appurtenant items which includes, but is not limited to: Constructing a new stone seawall to bridge the gap in the existing stone seawall between the Valentine Street entrance and the south end of the Bathing Pavilion Lot, grouting the top and landward face of the new seawall, constructing a vehicular crossover structure up and over the new seawall, constructing a pedestrian staircase on the seaward side of the wall adjacent to the vehicular crossover structure, constructing a pedestrian crossover staircase and ADA ramps on the seaward side of the new seawall in front of the Pavilion building, reconstructing the existing pedestrian crossover structure at the south end of the Bathing Pavilion Lot, converting the contractor staging area to a gravel parking lot post-construction, and other appurtenant items necessary to complete the work. The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 15.1 – EXCAVATION:

In accordance with Section 1:02.i of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 15.2 – NEW ARMOR CAPSTONE:

In accordance with Section 1:02.ii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 15.3 – NEW CORE STONE:

In accordance with Section 1:02.iii of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

11:00 (40) TECHNICAL SPECIFICATION:

ITEM NO. 15.4 – NEW MAT STONE:

In accordance with Section 1:02.iv of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE."

ITEM NO. 15.5 – FILTER FABRIC:

In accordance with Section 1:02.v of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 28:00 "GEOTEXTILE."

ITEM NO. 15.6 – GROIN SEALING:

In accordance with Section 1:02.vii.B of the Project Description.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

ITEM NO. 15.7 – VEHICULAR CROSSOVER CONSTRUCTION:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to construct the vehicular crossover structure within Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, Precast Concrete Retaining Wall (landward side), the additional excavation, filter fabric, and jetty stone necessary to construct the seaward ramp, 8" Thick Concrete Surface Course, Steel Backed Timber Guiderail, Backfill, and all other items necessary for construction.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Precast Concrete Retaining Wall

In accordance with Section 513 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, with the following exceptions:

1. This item shall include all excavation, backfill, concrete foundation, filter fabric, formliner, staining, labor and materials complete and in place as shown on the project plans.
2. The front face of the T-wall shall have a formliner finish. The formliner liner pattern shall be of medium to large cut ashlar stone, 1-1/2" to 2" maximum reveal.
3. The formliner shall be RE Ashlar, Pattern Number 1523 manufacture by Spec Formliners, Inc. or approved equal.
4. A multi-color stain shall be applied to the finished surfaced. A minimum of four colors shall be utilized shall be provided a natural stone look. Use an acrylic resin-based or acid-based color stain formulated to penetrate finished concrete surface, creating a surface finish that will allow water vapor transmission and resist deterioration from water, acid, alkali, fungi and sunlight. Stain shall be acceptable to marine environments.
5. A 4'x4' sample concrete casting with the selected formliner and stain shall be provided to the owner. The owner shall approve the casting sample, stain pattern and color before any T-Wall components are cast. The owner may request up to three additional samples be cast with different formliners and/or color stains for review and approval.

Jetty Stone

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE," with the following exceptions:

1. This stone required to construct the seaward side of the vehicular crossover structure shall be considered separate from the stone required to construct the seawall to the template in Typical Cross Section B-2, as shown on the Project Plans. Only the additional stone necessary to construct the seaward side of the vehicular crossover structure in Typical Cross Section C shall be factored into the Vehicle Crossover Construction pay item.
2. All stone required to construct this item shall be tied into the adjacent seawall and maintain consistent interlock as specified in the Project Plans and Section 19:00 "STANDARDS FOR JETTY STONE."

Concrete Surface Course, 8" Thick

In accordance with Section 405 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, with the following exceptions:

11:00 (42) TECHNICAL SPECIFICATION:

1. This item shall include all concrete, reinforcement, anchors, drilling and grouting, labor and all materials complete and in place as shown on the project plans.
2. All reinforcement shall be corrosion protected.
3. The epoxy grout shall be selected off the NJDOT's approved materials list and submitted for review and approval by the engineer.

Steel Backed Timber Guiderail

In accordance with Section 609 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, with the following exceptions:

1. Work of this item includes anchor bolts, steel base plates, steel posts, timber rails, steel back plates, timber blocking and all other items necessary for construction, complete and in place as shown on the project plans.
2. Steel Backed Timber Guiderail shall conform to section 617 of the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-14.
3. Steel Backed Timber Guiderail shall be manufactured by Cor-Tenn, or approved equal.
4. All steel members shall be painted in accordance with Section 906.06 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein. The color shall be brown to match Federal Chip Number 30111.
5. The estimated quantity for bidding purposes under this item is three hundred (300) linear feet of steel backed timber guiderail.

Regulatory & Warning Signs

In accordance with Section 612 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

The total estimated quantity for this bid item is ten (10) square feet of regulatory and warning signs.

ITEM NO. 15.8 – TIMBER STRUCTURES:

- (A) **Pedestrian Crossover Reconstruction:** The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the partial reconstruction of the existing timber pedestrian ramp crossover at the southern end of Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (B) **Stairs & ADA Ramp Construction:** The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the construction of new timber stairs and ADA ramp to provide access from the proposed elevated deck (by others) to be constructed above the crest of the seawall down to the beach fronting the Monmouth Beach Bathing Pavilion within Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (C) **Pedestrian Staircase Construction:** The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the construction of the proposed timber pedestrian staircase adjacent to the proposed vehicle crossover at the northern end of Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This work shall be executed as specified in Section 510, Section 504 and Section 502 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein. The work for the various timber construction shall consist of but not limited to: the furnishing, fabrication, and erection of all timbers and associated materials, including the timber joists, timber posts, pickets, face beams, header beams, decking as directed by the engineer or as shown on the plans, plank deck, necessary galvanized timber connecting hardware (such as nails, screws, lag bolts, nuts and washers, tie rods, plates, hangers, angles, etc.), cross bracing, piles, steel sleeves, attachments, concrete, reinforcement, drilling and grouting, and all other work associated with the timber crossover as shown on the project plans, complete and in place. This Section also describes the requirements for constructing timber with associated timber ramps, timber railings, ADA compliant railing sections, timber decking, timber stairs and landings.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Materials:

Materials shall conform to Section 903, 905, 906, 908 and 915, of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, unless otherwise specified.

Timber decking shall be secured to timber joists with stainless steel wood screws. Stainless steel screws shall be "Bugle Head Wood Screws" as manufactured by Sea-Sure, or approved equal.

The plates, angles nuts, bolts, washers and all other hardware for the connections below the timber decking shall be of hot dipped galvanized steel. The galvanizing shall not be damaged during transportation, storage or construction. All damage to the galvanizing shall be repaired in accordance to these specifications

Galvanizing for Connectors: ASTM A123 minimum 2.0 oz/sq ft coating thickness; galvanize after fabrication.

Galvanizing for Nuts, Bolts and Washers: ASTM A153.

All handrails shall include mounting brackets, hardware, all rails, posts, handrails at stairs and ramps, reinforcing, miscellaneous parts and fittings complete, in place, as shown on the project plans.

Handrails at Stairs and Ramps:

All stairs and ramps shall be provided with stainless steel handrails. All handrails shall include stainless steel rails, mounting brackets, hardware, miscellaneous parts and fittings as shown on the project plans and as per manufacturer's recommendations, complete and in place.

All rails, posts and elbows shall be 1-1/2" schedule 40, type 304, ornamental grade, stainless steel tubing conforming to ASTM A554. Railing shall be factory fabricated in complete sections ready for installation at the work site. Bends in the railings shall be smooth and made in a manner that will not crush or deform the railing. All welds shall be ground smooth and railing shall be free of burrs and sharp corners and edges. Welds shall be cleaned and blended to match the finish of the railing.

Style shall match existing adjacent railing.

Provide shop drawings for approval prior to fabrication. Handrails shall be installed as shown on approved drawings, as modified by actual field dimensions, in accordance with the manufacturer's recommendations.

Work shall be performed according to approved shop drawings by workmen experienced in the fabrication and erection of stainless steel handrails.

Construction:

Working Drawings: The Contractor shall field verify all existing dimensions and elevations prior to preparing shop drawings

Shop Drawings for the timber crossover shall then be submitted in accordance with Section 105 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

The drawings shall show at a minimum: the field verified dimensions, elevations, associated connections details, and the connector hardware to be used.

The existing dimensions and elevations of the timber structures to be constructed shall be field verified at the earliest possible time and shown in submitted shop drawings. Shop drawings shall be approved by the Engineer prior to ordering materials. All materials ordered by the contractor prior to this point are solely at the contractor's risk. The timber materials shall be then ordered as soon as possible in the project in order to avoid fabrication delays due to long lead times which may delay the project.

General Timber Construction:

The construction of the various timber crossover including the furnishing, preparing, fabricating, erecting, treating, and painting of the Timber shall conform to Sections 510 and 915 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein:

Pilot holes shall be drilled prior to installing screws and bolts in the timber members. Nails shall be driven with sufficient force to set the heads flush with the surface of the wood. Deep hammer marks in wood surfaces may be cause for rejection. All cutting, framing and boring of treated timbers shall be done before treatment.

Timbers shall be handled without dropping, breaking of outer fibers, bruising or penetrating the surface with tools. They shall be handled with rope slings. Cant hooks, peaveys, pikes or hooks shall not be used.

When field fabrication of timber is required, all cuts and bore holes shall be immediately field treated in accordance with AWPA standard M4. Connectors shall be of corrosion-resistant metal.

Set structural timber framing level and plumb, in correct position.

Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in indicated alignment until completion of erection and installation of permanent bracing.

Do not field cut or alter structural members without approval of Engineer.

After erection, touch-up galvanized surfaces with zinc primer.

Test Piles:

Test piles of the specified materials, dimensions, and at the designated locations shall be furnished and driven with an impact hammer unless specifically stated otherwise in the Special Provisions or on the plans. In general, lengths of test piles will be greater than the estimated length of production piles to provide for variation in soil conditions. The driving equipment and procedure (criteria) used for driving test piles shall be identical to that which the Contractor proposes to use on the production piles. Test piles shall be driven at the designated locations to the bearing capacity and tip elevation that is shown on the Plans. The Engineer shall be the sole judge in determining bearing capacity and the length of pile to be driven.

Dynamic Pile Load Tests:

Monitoring of all test piles with PDA shall be performed during the full length of driving and, if restrike is required, during restrike.

The contractor shall drive the test piles and production piles designated for PDA to the depth at which the required ultimate bearing capacity has been achieved provided that the minimum tip elevations has been achieved, unless directed otherwise by the Engineer. All test piles shall be restruck. PDA monitoring shall be performed during the restrike. If the required ultimate bearing capacity is not achieved during initial driving by a depth of 5 feet below the minimum tip elevation the initial driving shall cease. The Contractor shall wait for a minimum period of 24 hours after initial driving and the pile shall be restruck either to verify that capacity has been obtained or to achieve capacity for those piles not achieving capacity during the initial driving.

If signification relaxation occurs, the Contractor, at the direction of the Engineer, may require additional waiting periods and restrikes. Based on the results, the Engineer shall determine whether restrike(s) will be required for production piles.

Additional piles may require monitoring by PDA as directed by the Engineer. Production piles shall not be ordered until PDA reports are reviewed and accepted by the Engineer. Additional PDA monitoring required by the Engineer, due to unacceptable results, as determined by the engineering shall be performed by the Contractor at no expense.

Production Piles:

Piles shall be furnished in accordance with an order list based on results obtained from driving test piles and on other geotechnical information, when available. Said order list will be approved by the Engineer, but shall be prepared by the Contractor. Said list shall not be prepared until all test piles are driven. Test piles shall be driven as early in the project as possible so as to minimize delays that could be caused by long lead times sometimes associated with obtaining production piles. The lengths of bearing piles shown on the plans are for estimating purposes only and are subject to variation based on results of test piles.

The Contractor may increase the length of the production piles to be furnished to provide fresh heading or to suit the Contractor's method at no additional cost.

Concrete

All concrete work shall be in accordance with Section 504 of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Epoxy grout shall be PE1000+ manufactured by Powers Fasteners or approved equal.

ITEM NO. 15.9 – GRAVEL STAGING AREA

The work under this item is to be bid upon and executed at a unit price per square yard for Gravel Staging Area, and shall include all labor, equipment, rigging, tools, and accessories required to excavate, grade, and construct the gravel staging area within Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

The total estimated quantity for this bid item is one thousand three hundred ninety (1,390) square yards.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

No. 8 Stone Surface Course – 2" thick:

In accordance with Section 302 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

No. 67 Stone Base Course – 6" thick:

In accordance with Section 302 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

Filter Fabric

In accordance with Section 28:00 "GEOTEXTILE."

Excavation:

In accordance with Section 32:00 "EXCAVATION."

ITEM NO. 15.10 – NFWF Landscaping (If and Where Directed):

The Borough, funded by a grant from the National Fish and Wildlife Foundation (NFWF), constructed dunes and installed extensive plant material in front of the Bathing Pavilion. The majority of this plant material conflicts with the proposed seawall alignment and will require replacement and/or relocation.

Note: All work throughout this section is to be constructed on an "if and where" basis, as directed by the Engineer.

Note: The determination whether to replace or relocate each plant indicated by the Engineer shall be at the Contractor's discretion. Should the Contractor decide to relocate a planting then the Contractor shall attempt to coordinate the transplanting with plant dormancy and weather conditions to maximize the chances of plant survival. If the plant does not survive transplanting then the Contractor shall replace the plant at no additional cost.

(A) Three Gallon Rosa Rugosa (Pink Flowering): The work under this item is to be bid upon and executed at a unit price per plant, and shall include all labor, materials, equipment, rigging, tools, and accessories required to either replace or remove, temporarily store onsite or at an approved location, and permanently transplant the landscaping as indicated on the project plans and as specified herein.

The quantity for this bid item is four hundred seventy-five (475) Three Gallon Rosa Rugosa (Pink Flowering) plants.

(B) One Gallon Rosa Rugosa (Pink Flowering): The work under this item is to be bid upon and executed at a unit price per plant, and shall include all labor, materials, equipment, rigging, tools, and accessories required to either replace or remove, temporarily store onsite or at an approved location, and permanently transplant the landscaping as indicated on the project plans and as specified herein.

The quantity for this bid item is six hundred twenty-five (625) One Gallon Rosa Rugosa (Pink Flowering) plants.

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11:00 (49) TECHNICAL SPECIFICATION:

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

Materials, Methods and Submittals shall conform to Section 811 – Planting, of the NJDOT Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein, unless otherwise specified

11:16 SECTION #12: MONMOUTH BEACH; ADMIRALTY BULKHEAD REMOVAL:

The work under this section includes the removal of approximately 28 linear feet of dilapidated wooden bulkhead between the stone seawall and the concrete foundation wall of the Admiralty parking garage, filling the void with stone, and other appurtenant items necessary to complete the work.

Note: The Contractor shall take all necessary precautions to prevent damage to existing wiring running along the bulkhead. Any damage occurring as a result of construction operations shall be repaired at the Contractor's expense.

The Contractor shall also take all necessary precautions to guard against movement, settlement, or damage to the adjacent concrete foundation wall for the Admiralty parking garage; he shall be liable for any such movement, settlement or damage, and repair promptly such damage when so directed at the Contractor's expense. If movement, settlement, or damage occurs as a result of removal or stone placement activities, the Contractor shall submit a repair plan to the project manager for approval. Repair damaged portions of existing structures according to the approved repair plan.

The work under this section is to be bid upon and executed under the following work items, more particularly described as follows:

ITEM NO. 16.1 – WOODEN BULKHEAD REMOVAL:

The work under this item is to be bid upon and executed on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required to cut off, at grade, the existing dilapidated wooden bulkhead, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS:

No specific materials are required to conduct this work. All plant and equipment including any containers required to legally dispose of concrete debris shall be accounted for in this bid item.

CONSTRUCTION METHODS:

Prior to the start of demolition, the contractor shall be required to meet onsite with the project manager to discuss the exact limits defined in the field and shall fully explain his method for safe removal of all bulkhead components. No degradable refuse, such as timber, shall remain in the area between the existing concrete foundation wall and stone seawall. All demolition materials must be removed from the site and disposed of in a lawful manner.

SUBMITTALS:

No submittals are required for this item, unless damage occurs as stated above.

ITEM NO. 16.2 – NEW ARMOR STONE:

The work under this item is to be bid upon and executed at a unit price per ton of new Armor Stone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Armor Capstone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

CONSTRUCTION MATERIALS, METHODS, AND SUBMITTALS:

In accordance with Section 19:00 "STANDARDS FOR JETTY STONE", in addition to the following:

The proposed armor stone shall be sized and placed as directed by the project manager or his representative to ensure the area between the existing concrete foundation wall and stone seawall is properly filled.

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11:00 (51) TECHNICAL SPECIFICATION:

11:17 CONSTRUCTION PROCEDURE:

Within five (5) calendar days after the date of the contract award, the Contractor shall furnish to the Manager or his representative, for his approval, a construction plan which shall include a statement as to the proposed work methods, sequence of construction and all other related procedures required for accomplishing all work items required under this contract within the stipulated contract time.

The construction plan shall include the means and methods the contractor plans to implement to complete the Project in accordance with stipulations mentioned in Section 1:04 of the Project Description.

The Project Manager reserves the right to reject, modify, require different construction methods or operations, additional rigging, equipment and/or personnel as he/she deems necessary in order to accomplish the contract requirements.

Any changes to the approved construction plan shall be reviewed and approved by the Project Manager prior to implementation.

11:18 TIDAL DATUM:

The datum plane of reference for this project is North American Vertical Datum of 1988 (NAVD88). Range of tide in the bay and ocean is 4.02 feet.

11:19 PROTECTION OF FISH AND WILDLIFE:

The Contractor shall at all times perform all work and take such steps required to minimize interference with or disturbance to fish and wildlife. To ensure consistency with the New Jersey Coastal Management Program, the Contractor shall adhere to the following conditions:

1. All staging areas must be returned to the pre-existing condition within 60 days of completion of the project.
2. The approved Federal Consistency Determination permit only authorizes work on parcels for which the property owner has authorized this work on their properties. Work on any other properties will require additional permits and approval from the appropriate property owners.
3. The Contractor shall adhere to the Sea Bright Borough Federal Beach Management Plan for the Protection of Federally and State-Listed Species (June 2006) and the Borough of Monmouth Beach Federal Beach Management Plan for the Protection of Federally and State-Listed Species (April 2008), as amended herein.

4. The Contractor shall coordinate points of beach access and staging areas with the US Fish & Wildlife Service (USFWS), New Jersey Field Office ("USFWS-NJFO"); ensuring the areas are located outside of areas known habitat for species of concern.
5. In order to protect habitat for State and Federally listed beach nesting birds, the Contractor:
 - a. Shall adhere to a seasonal restriction on all work, for all work locations, as well as any staging of work areas, from March 15th through August 31st of each calendar year; and,
 - b. Shall notify the NJ Division of Fish & Wildlife Endangered & Nongame Species Program ("ENSP") as work in each of the project locations is concluding in order for ENSP staff to inspect and assess the work locations for unexpected habitat changes or other problems that need correction. The Contractor is responsible for assuming all liability for any corrective work necessary to repair injury to beach-nesting bird habitat.
6. For work proposed to take place at any point during the Seabeach Amaranth growing season, which runs from May 15th through November 30th, the Contractor must implement appropriate survey, monitoring and coordination efforts with the USFWS-NJFO:
 - a. A qualified biologist shall conduct a survey of the project area a maximum of one week prior to the initiation of construction, but no earlier than May 1st, in order to document the presence or absence of seabeach amaranth. The survey shall be conducted by walking slowly and carefully in a zig-zag fashion from the high-water line (seaward limit of vegetation) to the dune, seawall, boardwalk, or other landward limit of the beach, ensuring complete survey coverage of the area of disturbance. (Note: Seedlings may be small and inconspicuous. The biologist may refer to the USFWS-NJFO collection of Amaranth photos found at "<http://www.fws.gov/northeast/njfieldoffice/endangered/amaranth.html#photos>".)
 - b. In the event that Seabeach Amaranth is observed, information including locations, number and size of plants shall be recorded and promptly provided to the USFWSNJFO, Division of Land Use Regulation Endangered & Threatened Species Unit and to the New Jersey Natural Heritage Program.

- c. In order to protect and avoid disturbance to all Seabeach Amaranth locations, symbolic fencing (i.e., post and string only: NEVER snow fence), marked with flagging and signs, shall be installed around each occurrence; providing a 10-foot buffer around all sides of the plant(s).
 - d. All construction activities shall avoid any delineated locations of Seabeach Amaranth and no materials or equipment shall be stockpiled or stored within 100 meters of known seabeach amaranth sites. All work crews shall be instructed to avoid fenced areas (i.e., do not enter on foot or via motor vehicle; do not stage or store materials or equipment in or near fencing; locate access routes away from fenced area; do not grade sand in or near fencing; etc.).
 - e. Symbolic fencing shall be removed upon completion of work.
 - f. For project initiated prior to May 1st but continuing into the Seabeach Amaranth growing season, the survey shall be conducted in areas not yet constructed as of May 1st.
7. Consistent with Assembly Bill, No. 2804, P.L. 2007, CHAPTER 113 the use of creosote treated material (or other descriptive term from the law) in the construction of the authorized structure(s) is prohibited.
8. This permit does not obviate the Contractor from obtaining any other necessary federal, state or local approvals.
9. The obtained Federal Consistency Determination permit does not authorize dredging activities.
10. All excavated material shall be disposed of in a lawful manner. For example, it should be placed outside of any flood hazard area, riparian zone, regulated water, freshwater wetland and adjacent transition area, and in such a way as to not interfere with the positive drainage of the receiving area.
11. The seawall must be constructed to withstand displacement, overturning, and failure due to undermining and/or pressure from soil, water and frost.
12. Public access to the waterfront and along the beach must be maintained during and after project construction.

The obtained Federal Consistency Determination permit is authorized pursuant to all parties following the guidelines set forth, and agreed upon, for the proposed work.

Pursuant to 15 CFR 930.44, the NJDEP Division of Land Use Regulation reserves the right to object and request remedial action if this proposal is conducted in a manner, or is having an effect on, the coastal zone that is substantially different than originally proposed.

Piping Plover, Least and Roseate Terns, Black Skimmers, and Seabeach Knotweed

During the beach nesting bird breeding season, March 15th through August 31st, or the fledging of the last chick, of each calendar year, the Contractor shall hire a qualified individual (qualifications subject to U.S. Fish and Wildlife Service approval) to conduct survey for the presence or absence of beach nesting bird activity and identify plover territorial, courtship, and nesting areas. If threatened or endangered birds are present, the USFWS will be consulted. Typically, a symbolic fence shall be erected by the Contractor at a distance of approximately 3,300 feet from these areas to prevent work from occurring, if identified. In the event that the buffer zone infringes upon the construction project work, the NJDEP shall consult with the USFWS to examine the appropriateness of any potential modifications to the buffer zone. The buffer zone may be adjusted for brood movements. The fence shall consist of string fencing approximately 4 feet high attached to poles no more than 15' apart and encompass at least a 100 yard buffer from the nest/colony. The fencing is intended to prevent personnel from traversing the area. The USFWS may require further limitations including complete stoppage of work within the area to prevent disturbance of nesting activities if actions beyond the buffer zone warrant.

Additional monitoring may be required by the USFWS by a qualified individual should the presence of T&E beach nesting birds occur. The Contractor shall be required to provide these services should they be requested. The USFWS has final say on all activity limitations/stoppages of work that may occur as a result of the beach nest bird activity.

For Sea Bright, there are two zones managed to promote the protection and recovery of listed species and the enhancement of their habitat: The border of Sandy Hook to the northern border of Ship Ahoy Beach Club and the southern border of the Driftwood Cabana Club to Monmouth Beach Borough border.

For Monmouth Beach, there are two zones managed to promote the protection and recovery of listed species and the enhancement of their habitat: the border of the Borough of Sea Bright to the Monmouth Beach Bath and Tennis Club and the southern limit of the Monmouth Beach municipal lot to the City of Long Branch Border.

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11:00 (55) TECHNICAL SPECIFICATION:

These areas have had a history of bird activity that may limit the work in and adjacent to the locations described during the beach nesting bird season.

The Contractor shall understand the risks inherent with potential work restrictions/stoppages and his bid prices shall be reflective of all such risks. The specification contained herein is a condensed version of Sea Bright and Monmouth Beach Beach Management Plans as an effort to inform the Contractor at the time of bid. These restrictions are subject to change per the updates to each municipality's Beach Management Plans and the Contractor shall be required to adhere to any such changes.

It is the Contractor's responsibility to review the supplied Beach Management plans (via CD at time of bid package pick-up) and familiarize themselves with the various requirements contained within. The Contractor shall make no additional claims other than for extension of time resulting from any limitations of work due to the protection of environmental resources, both flora and fauna as described herein.

Measurement and Payment:

No separate measurement or payment will be made for the protection of fish and wildlife and all costs associated therewith shall be included in the lump sum price bid for Item No. 1 - General Work.

11:20 STORM DRAINAGE:

The Contractor shall be required to maintain stormwater runoff throughout the contract.

Measurement and Payment:

No separate measurement or payment will be made and all costs associated therewith shall be included in the lump sum price bid for Item No. 1 - General Work.

11:21 CONTRACTOR WORK AREA:

The staging areas shall be indicated at the Sea Bright Municipal Parking Lot, Monmouth Beach Bathing Pavilion Parking Lot and as identified on the project plans shall be protected by portable chain link fencing six feet in height.

The working areas shall be confined within the Limit of Disturbance delineated in the contract drawings and shall be limited to 600' in length (north to south) that will progress and delineate by orange safety fence with proper warning signage. Adequate security personnel shall be

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11:00 (56) TECHNICAL SPECIFICATION:

provided by the Contractor to restrict unauthorized entry into the work area during all times of operation.

The Contractor shall be permitted to haul and temporarily stockpile at an upland location within the defined construction limits no more than the amount of stone required to reconstruct the seawall for five (5) working days or 3,500 tons, whichever is less, at any given time through the project duration unless otherwise directed by the project engineer or his representative. The stockpiles for each stone type shall not be intermingled and shall be confined to an overall area measuring 100 feet wide by 150 feet long within the 600' long progressing construction area as demarcated by construction fencing. The height of each stockpile shall not exceed eight (8) feet or the height of two (2) armor cap stones stacked atop one another, whichever is less.

Measurement and Payment:

No separate measurement or payment will be made for the contractor to adhere to the staging and work area requirements and all costs associated therewith shall be included in the lump sum price bid for Item No. 1 - General Work.

11:22 EXISTING SEAWALL SECTIONS:

The estimated subterranean limits of the existing stone seawall have been outlined in the cross sections on the project plans. The extent of this existing stone is based on a combination of visual inspection and historical aerial photography. However, because of the dynamic nature of the work environment, these cross sections may not accurately depict the stone that actually exists.

The Contractor shall be responsible for excavating to locate the exact limits of all existing subsurface stone in these regions. Care shall be taken to not unreasonably disturb the existing stone above and below grade during excavation. After excavation, at an interval to be determined by the Project Manager, the Project Manager or his representative must inspect the stone limits prior to the Contractor starting any stone work.

Onsite adjustments to the template may be made based on actual field conditions. Unit prices for each bid item shall account for the possible variability in the actual construction of each stone layer.

11:23 ONSITE DISPOSAL OF MATERIALS:

No onsite disposal of any kind shall be permitted. Such prohibited activities include, but are not limited to disposal of any debris resulting from the contract work and any wastes, effluents, trash, garbage, oil, grease, chemicals, etc., in or adjacent to the work area. If any waste material is dumped anywhere, the Contractor shall remove the material

11:00 (57) TECHNICAL SPECIFICATION:

and restore the area to its original condition. If required, contaminated ground shall be excavated and disposed of as directed by the Project Manager and replaced with suitable fill material, compacted and finished with topsoil, and planted as required to re-establish vegetation.

11:24 SOIL EROSION AND SEDIMENT CONTROL:

All work under this item be included under the item "General Work", and shall include all materials, required for the execution and completion of the project work as a whole, and not specifically provided for under any other work item.

1. Standards for Soil Erosion and Sediment Control in New Jersey, N.J.A.C. 2:90-1.3, including the following Sections:

- (a) 3.11 Temporary Vegetative Cover for Soil Stabilization.
- (b) 3.31 Stabilization with Mulch Only.
- (c) 4.10.1 Dust Control.
- (d) 4.13.1 Sediment Barrier.

2. Materials must be as specified under "Standards for Soil Erosion and Sediment Control in New Jersey", N.J.A.C. 2:90-1.3.(2)

3. Temporary vegetative cover shall consist of annual ryegrass applied uniformly at a rate of 0.9 lbs. per 1,000 sq. ft. (40 lbs/ac). Limestone (pulverized dolomitic equivalent to 50 percent calcium plus magnesium oxides) shall be applied at the rate of 135 lbs/1,000 sq. ft. (3 tons/ac) and fertilizer (10-20-10 or equivalent) at the rate of 14 lbs/1,000 sq. ft. (600 lbs/ac).

4. When required for sites difficult to vegetate (sands, slopes, hydro-seeding and off-season operations), mulching shall be accomplished as follows:

A. Mulch Materials should be unrotted salt hay, hay, or small grain straw at a rate of 1-1/2 to 2 tons per acre, or 70 to 90 pounds per 1,000 sq. ft. Mulch blowers should not grind or chop material.

B. Spread Uniformly by hand or mechanically so that approximately 75% to 95% of the soil surface will be covered. For uniform distribution of hand spread mulch, divide area into approximately 1,000 sq. ft. sections and distribute 70 to 90 lbs. within each section.

C. Mulch Anchoring shall be accomplished using either peg and twine, mulch netting, mulch-anchoring tool or liquid mulch-binder, per the accompanying "Stabilization with Mulch Only" specifications.

* Seeding dates: 2/15 - 5/1 and 8/15 - 10/15

5. Mulch materials should be unrotted salt hay, hay or small grain straw at the rate of 1-1/2 to 2 tons per acre, or 70 to 90 lbs. per 1,000 sq. ft. Mulch blowers should not grind or chop the material.
6. Spread uniformly by hand or mechanically so that approximately 70 percent to 95 percent of the soil surface will be covered. For uniform distribution of hand spread mulch, divide area into approximately 1,000 sq. ft. sections and distribute 70 to 90 lbs. within each section.
7. Mulch anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes and costs:
 1. Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 ft. in all drive directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a crisscross and a square pattern. Secure twine around each peg with two or more round turns.
 2. Mulch Netting - Staple paper, jute, cotton or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.
 3. Mulch Anchoring Tool - A tractor-drawn implement especially designed to punch and anchor mulch into the soil surface. This practice affords maximum erosion control, but its use is limited to those slopes upon which the tractor can operate safely. Tool penetration should be about 3 to 4 inches. On sloping land, the operation should be done on the contour.
 4. Liquid Mulch-binders - May be used to anchor salt hay, hay or straw mulches.
 - a. Applications should be heavier at edges where wind catches the mulch, in valleys and at crests of banks. Remainder of area should be uniform in appearance.
 - b. Use one of the following:
 - i. Emulsified asphalt - (SS-1, CSS-1, CMS-2, MS-2, RS-2, CRS-1, and CRS-2). Apply 0.04 gal/sq. yd. or 194 gal/ac on flat slopes and on slopes less than 8 ft. high. On slopes 8 ft. or more high use 0.075 gal/sq. yd. or 363 gal/ac.

- ii. Cutback asphalt rapid curing (RC-70, RC-250, and RC-800) or medium curing (MC-250 or MC-800). Apply 0.04 gal/sq. yd. or 194 gal/ac on flat areas and on slopes less than 8 ft. high. On slopes 8 ft. or more high use 0.075 gal/sq. yd. or 363 gal/ac.
- iii. Synthetic or Organic Binders - binders such as Curasol, DCA-70, Petro-set, Terra-tack, or approved equal may be used at rates recommended by the manufacturer to anchor mulch materials.

NOTE: *All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products. Or equals may be deemed acceptable based upon review.*

- 8. Wood-fiber or paper-fiber mulch at the rate of 1,500 lbs. per acre may be applied by hydroseeder. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.
- 9. Irrigation - (where feasible) - If soil moisture is deficient, and mulch is not used, supply new seedings with adequate water (a minimum of 1/4 in. twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.
- 10. Install and maintain temporary measures for soil erosion and sediment control in accordance with the "Standards for Soil Erosion and Sediment Control in New Jersey" and as shown on the plans.
- 11. Contractor shall be responsible for immediate repairs of damages incurred by failure to maintain temporary measures for soil erosion and sediment control.
- 12. Install temporary seeding on all areas exposed for three (3) months or more.
- 13. If applicable, contractor must notify governing Soil Erosion Control Agency in writing at least 72 hours prior to beginning construction. Failure to do so may result in a fine by the Agency, which fine shall be the responsibility of the contractor.

Dust Control

Dust control shall conform with and be performed in accordance with the construction plans, and/or as directed by the engineer, Section 4.10.1 of

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11:00 (60) TECHNICAL SPECIFICATION:

the Standard for Soil Erosion Control in New Jersey, July 1999 and Section 107.28 of the New Jersey Department of Transportation Standard Specifications.

Roadway Cleaning:

If approved by the engineer and the contractor utilizes the roadways as a construction entrance, existing roadways shall be cleaned as needed and directed by the Monmouth County Soil Conservation District and the engineer.

The contractor shall install all soil erosion and sediment control measures in accordance with Chapters 3 and 4 of the Standards for Soil Erosion and Sediment Control in New Jersey, July 1999. All measures shall be maintained and left in place until construction is complete and area is stabilized.

When seasons and/or other conditions are not suitable for growing an erosion-resistant cover, areas shall be temporarily stabilized in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey, July 1999.

No specific payment will be made for Soil Erosion Control and should be included in the bid for Item No. 1 – General Work. The cost thereof will be included in Item No. 1 – General Work, which price shall include the cost of furnishing and installing all required hay bales and lath, silt fence and inlet protection structure materials, dust control, complete, any and all temporary stabilization as may be required, roadway cleaning, all labor, equipment and all else necessary therefore and incidental thereto.

11:25 SITE GRADING:

Site Grading shall consist of all regrading required within the construction area including rough grading and final grading to restore the beach to the condition prior to the contractor's operation. Fine grading of the entire construction area shall consist of mechanically or manually raking, scraping, dragging, smoothing and rolling all surfaces for the preparation of the respective improvements. Fine grading shall remove all irregularities and undulations and shall follow the grades shown on the plan.

No specific payment will be made for Site Grading and should be included in the Excavation bid items for each section which includes all fine grading of the entire beach construction area, all embankment, all materials, labor, equipment and appurtenances required. Payment will

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11:00 (61) TECHNICAL SPECIFICATION:

be made for one occasion, no matter how many occasions are required to complete the site grading to the satisfaction of the engineer.

11:26 ONSITE MATERIAL:

The material on site is believed to be comparable to the stone specified. No guarantee is given of this, however, and the State of New Jersey, County of Monmouth, or The Borough of Sea Bright will not be responsible if the actual conditions are found to be different. All existing debris, rubble, roots, stumps, logs, rocks, rip-rap, cable or hulks which come within the lines of the work or which interfere with the prosecution of the work shall be removed and disposed of in a manner satisfactory to the engineer, or his appointed representative, by the contractor, and the cost thereof shall be included in his bid for the work.

Bidders are encouraged to visit the site of the work, and to ascertain for themselves the kind of material to be met with and all other local conditions, and it will be assumed that their bids are based upon personal information. No extra allowance will be made for excavation of material different than herein specified, nor will extra allowances be paid should mechanical breakdowns occur due to the above-mentioned obstacles.

11:27 CONTRACT TIME:

The total allowed contract time is **545** calendar days. In the event of severe weather, which would not allow for work during these days, the contractor will be credited by the inspector against total elapsed work time. See Section 7:00 for further particulars.

11:28 PAYMENT:

ITEM NO. 1 - GENERAL WORK:

This item under this item is to be paid for on a lump sum basis. Estimate of percentage complete for monthly partial payments will be made.

Forty percent (40%) of the lump sum bid shall be paid when mobilization of plant, equipment, facilities and Inspector's trailer is complete and is ready to begin operations.

The remaining sixty percent (60%) will be paid only upon completion of all work under the contract, specifically including the complete and satisfactory clean-up of all areas used for the contractor's operations, such as areas used for access or other operations.

11:00 (62) TECHNICAL SPECIFICATION:

ITEM NO. 2 – SURVEY:

The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for conducting separate mark-out surveys, as-built surveys, and periodic grade/elevation verification of the project site, all prepared by a Professional Land Surveyor licensed in the State of New Jersey.

ITEM NO. 3 – STRUCTURE MONITORING:

The work under this item is to be paid for on a lump sum basis and shall include all labor, materials and equipment, and performing all operations required to monitor structures for potential effects of the contract work.

ITEM NOS. 4.1, 5.1, 6.1, 7.1, 8.1, 9.1, 11.1, 13.1, 15.1 – EXCAVATION:

The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required to excavate, temporarily stockpile at an upland, onsite location, and permanent placement of the sand upon completion and acceptance of a section of the seawall by the Manager, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NOS. 4.2, 6.2, 7.2, 8.2, 9.2, 11.2, 15.2, 16.2 – NEW ARMOR CAPSTONE:

The work under this item is to be paid for at a unit price per ton of new Armor Capstone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Armor Capstone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NOS. 4.3, 6.3, 7.3, 8.3, 9.3, 11.3, 15.3 – NEW CORE STONE:

The work under this item is to be paid for at a unit price per ton of new Core Stone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Core Stone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

11:00 (63) TECHNICAL SPECIFICATION:

ITEM NOS. 4.4, 6.4, 7.4, 8.4, 9.4, 11.4, 15.4 – NEW MAT STONE:

The work under this item is to be paid for at a unit price per ton of new Mat Stone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Mat Stone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NOS. 4.5, 6.5, 7.5, 8.5, 9.5, 11.5, 15.5 – FILTER FABRIC:

The work under this item is to be paid for at a unit price per square foot of new Filter Fabric, and shall include all labor, materials, equipment, rigging, tools, and accessories required to install the filter fabric, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NOS. 4.6, 5.2, 6.6, 8.6, 9.6, 13.2 – REHANDLED ARMOR CAP STONE:

The work under this item is to be paid for at a unit price per ton of Rehandled Armor Cap Stone, and shall include all labor, materials, equipment, rigging, tools, and accessories required to excavate, extract, clean, sort, inspect, temporarily stockpile at an upland, onsite location, and permanently place the stone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NOS. 4.7, 5.3, 6.7, 7.7, 8.7, 9.7, 10.1, 11.6, 13.3, 14.1, 15.6 – GROIN SEALING:

- (A) **Groin Sealing Removal (Excluding Item Nos. 4.7, 7.7, 11.6, & 15.6):** The work under this item is to be paid for on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to remove the existing grout necessary to facilitate the rehandling of the existing armor cap stone and/or installation of new groin sealing to the depths required, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (B) **New Groin Sealing:** The work under this item is to be paid for at a unit price per cubic yard of installed groin sealing, and shall include all labor, equipment, rigging, tools, and accessories required to seal the crest and/or landward face of the constructed seawall with a layer of cementitious-type mixture to the penetration depths required, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NOS. 4.8 & 12.1 – CONCRETE SPLASH PAD:

- (A) **Concrete Splash Pad Demolition:** The work under this item is to be paid for at a unit price per square yard of existing concrete splash pad removal, and shall include all labor, materials, equipment, rigging, tools, and accessories required to demolish and remove any damaged portions of the existing concrete splash pad throughout the section as directed by the Project Manager, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (B) **Concrete Splash Pad Construction:** The work under this item is to be paid for at a unit price per square yard of installed concrete splash pad, and shall include all labor, materials, equipment, rigging, tools, sub-base preparation, compaction, rebar, and accessories required to reconstruct the damaged portions of concrete splash pad throughout the section as directed by the Project Manager, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 6.8 – GRAVEL STAGING AREA

- (A) **Gravel Staging Area:** The work under this item is to be paid for at a unit price per square yard of installed Gravel Staging Area, and shall include all labor, equipment, rigging, tools, and accessories required to excavate, grade, and construct the gravel staging area within Section 3, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (B) **Concrete Curb:** The work under this item is to be paid for at a unit price per linear foot of installed concrete curb, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete vertical curb within Section 3 which will surround the future gravel parking area, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (C) **Concrete Driveway, 6" Thick:** The work under this item is to be paid for at a unit price per square yard of installed concrete driveway, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete driveways within Section 3 complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NOS. 6.9 & 15.7 – VEHICLE CROSSOVER CONSTRUCTION:

The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required to construct the vehicle crossover structure, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 7.6 - REHANDLED STOCKPILED STONE:

The work under this item is to be paid for at a unit price per ton of Rehandled Stockpiled Stone, and shall include all labor, materials, equipment, rigging, tools, and accessories required to clean, sort, inspect, temporarily stockpile at an upland, onsite location, and permanently place the existing stockpiled stone currently located within the Section 3 Staging Area alongside the north end of the Municipal Lot, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 7.8 – PARKING LOT RECONSTRUCTION:

(A) Mill & Overlay: The work under this item is to be paid for at a unit price per square yard of completed asphalt work, and shall include all labor, materials, equipment, rigging, tools, and accessories required for all asphalt milling and construction work associated with the reconstruction of the existing parking lot within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, HMA Milling to an average depth of 2", 2" thick HMA 9.5M64 Surface Course, tack coat, polymerized joint adhesive, grading, compacting, and all other items necessary for construction.

(B) Asphalt: The work under this item is to be paid for a unit price per square yard of completed asphalt work, and shall include all labor, materials, equipment, rigging, tools, and accessories required for all new asphalt work associated with the reconstruction of the existing parking lot within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, 6" thick dense graded aggregate base course, 4" thick HMA 19M64 Base Course, 2" thick HMA 9.5M64 Surface Course, tack coat, prime coat, polymerized joint adhesive, excavation, grading, compacting, and all other items necessary for construction.

11:00 (66) TECHNICAL SPECIFICATION:

- (C) **Striping:** The work under this item is to be paid for at a unit price per linear foot of installed traffic striping, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the application of long life thermoplastic traffic markings atop the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (D) **Concrete Curb:** The work under this item is to be paid for at a unit price per linear foot of installed concrete curb, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete vertical curb which will surround the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

- (E) **Concrete Sidewalk:** The work under this item is to be paid for at a unit price per square yard of installed concrete sidewalk, and shall include all labor, equipment, rigging, tools, and accessories required to construct the concrete sidewalk between the proposed section of seawall and proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

This item includes, but is not limited to, all concrete, reinforcement, formwork, 4" thick crushed stone base course, 4" thick concrete sidewalk, and all other items necessary for construction.

- (F) **Regulatory and Warning Signs:** The work under this item is to be paid for at a unit price per square foot of installed regulatory and warning signs, and shall include all labor, equipment, rigging, tools, and accessories required to install post-mounted signage designating handicap-accessible parking spaces within the proposed asphalt parking area within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 7.9 – PAVILION PEDESTRIAN BEACH ACCESS:

The work under this item is to be paid for on a lump sum basis, and shall include all labor, equipment, rigging, tools, and accessories required to construct the Pavilion pedestrian beach access structures within Section 4, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

11:00 (67) TECHNICAL SPECIFICATION:

This item includes, but is not limited to, the furnishing, fabrication, and erection of all timbers and associated materials, including the timber piles, posts, joists, pickets, face beams, header beams, and decking; stainless-steel pipe and tube railings; concrete sidewalk and miscellaneous concrete; and all other items necessary for construction.

ITEM NO. 8.8 – TIMBER BOARDWALK RECONSTRUCTION:

The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the complete reconstruction of the timber boardwalk within southernmost end of Section 4 and the beginning of Section 5, as well as stairs and ADA access ramps, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 9.8 – PEDESTRIAN CROSSOVER RECONSTRUCTION:

The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the complete reconstruction of the timber crossover within Section 6, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NOS. 10.2 & 14.2 – CONCRETE BAG REPAIRS:

The work under this item is to be paid for at a unit price per cubic yard of Concrete Filled Bags (if and where directed), and shall include all labor, materials, equipment, rigging, tools, and accessories required to fill the voids, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 15.8 – TIMBER STRUCTURES:

(A) Pedestrian Crossover Reconstruction: The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the partial reconstruction of the existing timber pedestrian ramp crossover at the southern end of Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

11:00 (68) TECHNICAL SPECIFICATION:

- (B) Stairs & ADA Ramp Construction:** The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the construction of new timber stairs and ADA ramp to provide access from the proposed elevated deck (by others) to be constructed above the crest of the seawall down to the beach fronting the Monmouth Beach Bathing Pavilion within Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.
- (C) Pedestrian Staircase Construction:** The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required for the construction of the proposed timber pedestrian staircase adjacent to the proposed vehicle crossover at the northern end of Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 15.9 – GRAVEL STAGING AREA

The work under this item is to be paid for at a unit price per square yard of installed Gravel Staging Area, and shall include all labor, equipment, rigging, tools, and accessories required to excavate, grade, and construct the gravel staging area within Section 11A, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 15.10 – NFWF Landscaping (If and Where Directed)

- (A) Three Gallon Rosa Rugosa (Pink Flowering):** The work under this item is to be paid for at a unit price per plant, and shall include all labor, materials, equipment, rigging, tools, and accessories required to either replace or remove, temporarily store onsite or at an approved location, and permanently transplant the landscaping as indicated on the project plans and as specified herein.
- (B) One Gallon Rosa Rugosa (Pink Flowering):** The work under this item is to be paid for at a unit price per plant, and shall include all labor, materials, equipment, rigging, tools, and accessories required to either replace or remove, temporarily store onsite or at an approved location, and permanently transplant the landscaping as indicated on the project plans and as specified herein.

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11:00 (69) TECHNICAL SPECIFICATION:

ITEM NO. 16.1 – WOODEN BULKHEAD REMOVAL:

The work under this item is to be paid for on a lump sum basis, and shall include all labor, materials, equipment, rigging, tools, and accessories required to cut off, at grade, the existing dilapidated wooden bulkhead, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

ITEM NO. 16.2 – NEW ARMOR STONE:

The work under this item is to be paid for at a unit price per ton of new Armor Stone, measured by scale, and shall include all labor, materials, equipment, rigging, tools, and accessories required to weigh, sample, test, inspect, transport, temporarily stockpile onsite and permanently place the new Armor Capstone, complete-in-place, to the lines and grades indicated on the project plans and as specified herein.

11:29 ACCESS:

The contractor shall obtain all access and/or rights of way as necessary for his operations. All access areas shall be barricaded when not in use and shall be maintained in a safe, clean condition. No access point will be used unless approved in writing by the project engineer.

11:30 WORK SCHEDULE:

Within ten (10) calendar days after the date of the contract award, the Contractor shall furnish to the Manager or his representative, for approval, a construction schedule which shall include a statement as to the planned mode of operations; a listing of construction material orders including a delivery schedule, and a full description of the equipment he plans to use. The approximate dates for each phase of operations shall be furnished at the pre-construction meeting.

The Project Manager reserves the right to reject, modify, require different construction methods or operations, additional rigging, equipment and/or personnel as he/she deems necessary in order to accomplish the contract requirements.

Any changes to the approved construction plan shall be reviewed and approved by the Project Manager prior to implementation. Said schedule shall be updated at least twice a month and shall be updated prior to, and provided at, all project meetings.

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11:00 (70) TECHNICAL SPECIFICATION:

11:31 NEW JERSEY PREVAILING WAGE ACT:

See section 5:04 herein for detailed requirements of the New Jersey Prevailing Wage Act. A copy of bulletin MW 210 entitled "Prevailing Rate of Wages on Public Contracts", issued by the State of New Jersey, Department of Labor and Industry, will be on file for inspection in the Trenton and Toms River offices of the Office of Coastal Engineering, together with "Prevailing Wage Determination", issued by the Commissioner of the Department of Labor and Industry, and will be attached to the contract for the project.

The following shall be added to Section 5:04:

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, may be obtained from the Davis-Bacon web site at <http://www.access.gpo.gov/davisbacon/nj.html> under the appropriate county where the project is to be performed, select the construction type heading: HEAVY.

Pay the prevailing wage rates determined by the United States Secretary of Labor and the New Jersey Department of Labor. If the prevailing wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the prevailing wage rate prescribed for that craft by the New Jersey Department of Labor, pay the higher rate.

State wage rates may be obtained from the New Jersey Department of Labor & Workforce Development (Telephone: 609-292-2259) or by accessing the Department of Labor & Workforce Development's web site at http://lwd.dol.state.nj.us/labor/wagehour/wagehour_index.html The State wage rates in effect at the time of award are part of this Contract, pursuant to Chapter 150, Laws of 1963 (N.J.S.A. 34:11-56.25, et seq.).

By submission of bid, the Contractor assures and certifies that it will comply with the minimum-wage and maximum-hour provisions of the Federal Fair Labor Standards Act.

If an employee of the Contractor or subcontractor has been paid a rate of wages less than the prevailing wage, the Department may suspend the Work, and declare the Contractor in default.

11:32 DIVISION OF MOTOR VEHICLES REGULATIONS:

All vehicles used on this project must meet current State regulations for travel on highways. The Contractor must conform to N.J.A.C. 7:27-14 "Diesel Idling Regulations".

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11:00 (71) TECHNICAL SPECIFICATION:

11:33 NEW JERSEY SALES AND USE TAX ACT:

See Subsection 5:04(A) herein for Sales Tax Exemption Statement.

11:34 AMERICANS WITH DISABILITIES ACT (A.D.A.):

Bidders are required to comply with the provisions of the Americans with Disabilities Act, (A.D.A.), as amended. This shall also pertain to any and all sub-contractors.

11:35 AFFIRMATIVE ACTION:

See Subsection 5:04 (B) herein for requirements. Bidders are required to comply with the requirements of P.L. 1975, c.127.

The parties to this contract agree to incorporate into this contract the mandatory language of Sub-section 3.4(a) of the Regulations promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time and the contractor and/or sub-contractor agree to comply fully with the terms, provisions and obligations of said Sub-section 3.4 (a), provided that said sub-section shall be applied subject to the terms of sub-section 3.4(d) of said regulations.

11:36 BUSINESS REGISTRATION:

All Contractors bidding the work under this contract shall comply with the provisions of P.L. 2001, c. 134, Business Registration. No state agency can enter into a contract with contractors unless first provided with proof of a valid business registration with the Division of Revenue. A hotline, the Client Registration Unit at Revenue, has been set up at (609)-292-1730 for validation of current status or new contractor registration.

11:37 PROJECT MEETINGS:

Project meetings shall be held on a weekly basis or at an interval determined by the Project Manager. The Contractor will be required to have all Superintendents, foremen and other persons involved in the oversight of the project in attendance, including same for all subcontractors.

11:38 PERMIT CONDITIONS:

The Contractor shall adhere to all permit conditions set forth in NJDEP Federal Consistency Determination File Nos. 1300-15-0005.1 CDT150001 and 1333-04-0001.3 CDT160001, dated November 2, 2015 and March 23, 2016, respectively, as located herein and any other applicable state, local, and federal permits. Any failure to adhere to all

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11:00 (72) TECHNICAL SPECIFICATION:

conditions currently and subsequently laid forth may result in fines levied to the Contractor from either the State or Federal Regulatory Enforcement Agencies.

11:39 SUBCONTRACTORS:

In addition to the requirements of Section 5:01 of the Standard Specifications, all subcontractors must be pre-qualified with the Office of Coastal Engineering for the type of work and estimated value to be performed.

In addition to the superintendence required by Section 5:01 of the Standard Specifications, the Contractor shall be required to furnish one superintendent at the site and on the Contractor's payroll to be responsible for coordinating, directing, inspecting and expediting the subcontract work at all times.

11:40 DIVISION OF PURCHASE AND PROPERTY (DPP) FORMS:

All Contractors bidding the work under this contract shall comply with the provisions of the State of New Jersey DPP, Information Sheet and Certification for Delegated Purchasing Authority Transactions. No state agency can enter into a contract with contractors unless first provided with the properly executed DPP forms, included herein. Included are the following forms:

1. Ownership Disclosure Form
2. Disclosure of Investigations & Actions Involving Bidder Form
3. Disclosure of Investment Activities in Iran Form
4. Source Disclosure Certification Form
5. MacBride Principles Certification Form
6. Vendor Certification & Political Contribution Disclosure Form
7. Two Year Chapter 51 / Executive Order 117 Vendor Certification & Disclosure of Political Contributions Form
8. Affirmative Action Supplement Form (AA302)

It is the Contractor's responsibility to ensure that they are in full compliance with the State of New Jersey DPP, Information Sheet and Certification for Delegated Purchasing Authority Transactions.

12:00 SURVEYS

12:01 PART 1 - GENERAL:

12:01.1 SCOPE OF WORK:

The work covered under this section consists of furnishing all labor, materials, plant and equipment, and performing all operations required for conducting as-built topographic surveys, mark-out surveys, and survey data submittals.

12:01.2 MEASUREMENT AND PAYMENT:

Payment for Surveys shall be in accordance with Section 11:00 "PAYMENT" subsection.

12:01.3 PRE-CONSTRUCTION SURVEY(S):

Pre-construction topographic surveys shall be performed of the entire area specified in Section 11:00 and as outlined on the project plans. The pre-construction topographic survey(s) and accompanying map(s) must be performed by a Professional Land Surveyor licensed in the State of New Jersey and shall be submitted to the Bureau of Coastal Engineering within thirty (30) calendar days from the Notice to Proceed and at a minimum five (5) days prior to initial construction.

12:01.4 AS-BUILT SURVEY(S):

As-built topographic surveys shall be performed of the entire work area as specified in Section 11:00 and as outlined on the project plans. The as-built topographic survey(s) and accompanying map(s) must be performed by a Professional Land Surveyor licensed in the State of New Jersey and shall be submitted to the Bureau of Coastal Engineering within fifteen (15) calendar days upon the completion of work for that related bid item.

12:01.5 MARK-OUT SURVEY(S):

Stake-out surveys shall be performed for each section of work as specified in Section 11:00 and as outlined on the project plans. The stake-out survey(s) must be performed by a Professional Land Surveyor licensed in the State of New Jersey. All surveying necessary for the prosecution of work, including, but not limited to, staking out of the baseline in 50' increments, the upper work limit line, the seaward extent of work, and all other surveying work not specifically mentioned to construct the project to the lines and grades illustrated on the plans. These stakes shall remain in place for the duration of the contract. Should stakes be removed or tampered with during construction, it is the responsibility of the Contractor to properly restake at no additional costs to the State of New Jersey.

12:00 SURVEYS

12:02 PART 2 - SURVEY REQUIREMENTS:

All surveys must be performed under the direction and supervision of a Professional Land Surveyor licensed in the State of New Jersey experienced in conducting surveys of a similar nature, and by the accompaniment of a representative from the Bureau of Coastal Engineering.

All calibrations, settings and tide gauge readings shall be made with the accompaniment of a representative from the Bureau of Coastal Engineering. Upon completion of the survey, the recording chart shall be signed and dated by the Bureau's representative as well as the Contractor's representative.

1. All survey data shall be referenced to National Geodetic Survey monumentation. First order vertical and horizontal. PID # of all monuments used shall be provided (ex. AB1234). Tidal benchmarks used/referenced shall be listed by PID # also.
2. The contractor shall establish ground control.
3. All existing structures, roads, utilities, topography, vegetation, wetlands, piers, bulkheads, pilings, stone, etc., shall be clearly surveyed within the project limits.
4. All existing navigational markers shall be accurately surveyed and recorded.
5. Cross sections shall be taken perpendicular to the baseline at the starting and ending stations and at 50' spacing. The survey lines shall extend a minimum of 100 feet seaward and 20 feet landward beyond the limits of the project area to be surveyed. Additional survey lines may be necessary at turning points in the baseline.
6. Elevations / Soundings taken along the cross section shall be a minimum of 10ft apart and where ever there is a break in the elevation. When more than one method of surveying is employed the two shall have 50 ft of overlap.
7. All information supplied (data, work drawings, cross-sections) shall include all raw survey data/notes.

12:00 SURVEYS

12:03 PART 3 - SURVEY MAP REQUIREMENTS:

All data obtained from survey(s) shall be used to produce an accurate map which shall be submitted along with the original recording chart and all original ground control data notes.

12:03.1 SURVEY MAPS:

The maps generated from the obtained surveys shall include the following:

1. The original map shall be drawn or plotted on mylar using a high quality black drafting ink.
2. All verbiage and numbering shall be either computer generated or leroyed.
3. Drawing scale shall be indicated on the drawing.
4. The drawing shall be twenty-four (24) inches by thirty-six (36) inches only. If additional sheets are required, match lines must be shown and sheets shall be consecutively numbered.
5. Each sheet shall contain a title block stating the following:
 - A. "(Type of Survey)", Name of Project and/or Channel Section(s), Municipality, County, State of New Jersey, Department of Environmental Protection, Office of Engineering and Construction, Bureau of Coastal Engineering.
 - B. Survey Date.
 - C. Scale
 - D. NJ DEP BCE Project No.
 - E. Sheet number and total sheets.
6. The New Jersey State Plane coordinate system (NAD 83) shall be used for the map grid system and clearly shown on the map and location plan.
7. Local tidal benchmark used for this project shall be listed by PID # and must be tied to NAVD88 (North American Vertical Datum of 1988) and shown on the generated maps.
8. All sections of the project alignment shall be appropriately labeled with their respective numbers and/or names.
9. The name of all water bodies, municipality(s), roads, lots and blocks.

12:00 SURVEYS

12:03 PART 3 - SURVEY MAP REQUIREMENTS:

12:03.1 SURVEY MAPS Con't:

10. Mean high, mean low and high tide water lines.

11. Topographic surveys shall display contour lines at 1-foot increments unless otherwise specified in Section 11:00.

12:03.2 COMPUTER DATA FILES:

In addition to the hard copy maps, computer data files of the submitted maps shall be provided on compact disks or flash drives with the following requirements.

1. PREFERRED FORMAT: .DWG drawing format (AutoCAD 2010 or newer). Each page of the drawing shall be included in one file with different layout views for each page.
2. IF ANY FORMAT OTHER THAN AutoCAD 2010 OR NEWER IS USED, CONSULTANT SHALL FIRST RECEIVE APPROVAL FROM THE PROJECT MANAGER, AND ENSURE COMPLETE AND TOTAL DRAWING EXCHANGE (fonts, line weight and type, proper location and orientation of all drawing details) BETWEEN CHOSEN FORMAT AND AutoCAD 2010 OR NEWER, BEFORE SUBMISSION.
3. No X-REF in drawings or attached image files.
4. Layers: Maximum 3 layers (3 colors).
5. Font: One font only, standard block lettering.
6. No shading or solid fill areas.
7. Limited cross-hatching, only if absolutely necessary.
8. All plan views shall be in the State Plane Coordinate System NAD83, in feet and tenths of feet, with a north orientation to the top of drawing sheet. Graphic scale shall be included.
9. All land elevations and depth references shall be in feet and tenths of feet and refer to North American Vertical Datum of 1988 (NAVD88).

12:00 SURVEYS

12:05 PART 4 - SUBMITTALS:

12:05.1 SURVEYS:

The contractor shall submit to the Bureau of Coastal Engineering for approval an original mylar along with two (2) copies of each generated map accompanied by computer data files of all submitted maps.

All submitted maps shall bear the embossed seal of the Professional Land Surveyor licensed in the State of New Jersey responsible for conducting and preparing the surveys.

All survey rolls, survey field data, and ground control data shall be submitted along with the maps. All submitted data, charts and maps shall become the property of the State of New Jersey, Bureau of Coastal Engineering. The contractor shall be given copies of all submitted data and generated maps if requested.

Should the survey data and/or generated maps be deficient, lacking information, illegible, or not in conformance with the standards outlined under this section, the Bureau reserves the right to order the contractor to re-perform the survey and/or redraw the map(s). Should this be required, no additional monies will be paid to the contractor by the State. The additional cost shall be the sole responsibility of the contractor.

--END OF SECTION 12:00 --

19:00 STANDARDS FOR JETTY STONE

19:01 PART 1 – GENERAL

19:01.1 SCOPE OF WORK:

Unless otherwise specified in Section 11:00, all stone furnished under these specifications shall be of the kind, grade and manufacture for the construction of the rubble-mound jetties, groins, seawalls and related structures; all in strict accordance with the Project Plans and Specifications.

19:01.2 APPLICABLE PUBLICATIONS:

CORPS OF ENGINEERS TESTING PROCEDURE (CRD-C) - Latest Edition

- CRD-C 107-69 Standard Method of Test for Specific Gravity, Absorption, and Unit Weight of Coarse Aggregate and Riprap
- CRD-C 137 Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
- CRD-C 144 Standard Test Method for Resistance of Rock to Freezing and Thawing
- CRD-C 145 Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
- CRD-C 148 Expansive Breakdown on Soaking in Ethylene Glycol

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) - Latest Edition

- ASTM C 88 Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
- ASTM C 535-89 Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

19:01.3 MEASUREMENT AND PAYMENT:

All costs associated with jetty stone shall be measured and paid for in accordance with Section 11:00 of the Specifications and as further specified herein. Should the Contractor elect to supply stone that is denser than as specified in Table 1 herein, he shall be compensated on an adjusted price per ton installed basis for each stone class density in Table 1. An example for a 200 lb./cu.Ft. Class I – Cap Stone has been provided below for clarification:

Compensation at 200 lb./cu. Ft.: 10T @ \$100/T = \$1,000

Adjusted Pay Ratio: $\frac{185 \text{ lb./cu.Ft.}^*}{200 \text{ lb./cu.Ft.}} = 0.925$

Adjusted Compensation: 10T x \$100/T x 0.925 = **\$925**

*Density for Class I – Cap Stone as identified in Table 1

19:00 STANDARDS FOR JETTY STONE

19:01 PART 1 – GENERAL

19:01.4 SUBMITTALS:

Before any stone is furnished under this contract, the Contractor shall notify the Project Manager of the name and the location of the quarry or quarries from which he proposes to furnish stone. The Project Manager reserves the right to inspect said quarries and select representative sample specimens of stone for initial testing as well as periodic sample selection at an interval determined by the Project Manager for continued quality assurance of delivered stone specified herein.

The Contractor shall establish and maintain quality control on placement operations to assure compliance with contract requirements and maintain records of his quality control for all construction. A copy of the following records and Contractor tests, as well as the records of corrective actions taken, shall be furnished to the Bureau as directed by the Project Manager:

19:01.4a Quarry Stone Quality Test Results:

All applicable test results from an approved testing organization attesting that the stone to be used in the work is of the kind, grade and manufacture required by these specifications shall be submitted to the Project Manager for review and approval within fifteen days (15) prior to furnishing.

19:01.4b Stonesetter Qualifications:

The Contractor shall submit the qualification records of the stonemaker as required under Section 19:03.3 to the Project Manager for review and approval.

19:01.4c Stone Setting Equipment:

The Contractor shall submit complete descriptions of all stone setting equipment and appurtenances to the Project Manager for approval prior to commencement of work.

19:01.4d Scale Certification:

The Contractor shall submit the certification records for all scales utilized on the project as required under these Specifications and in accordance with New Jersey's Weights and Measures.

19:01.4e Delivery Records:

Field inspect and submit all material weight records and receipts. The Inspector shall reject all materials damaged in transport from quarry to site.

19:00 STANDARDS FOR JETTY STONE

19:01 PART 1 – GENERAL

19:01.4 SUBMITTALS:

19:01.4f Construction Records:

For every 100 feet of completed seawall, or on a monthly basis, whichever is less elapsed time, the Contractor shall submit all related construction records to the Project Manager, including, but not limited to the following:

1. Determination of proper gradation of stone, by weight, and by creation of gradation curve based on stone used.
2. Control of stone placement by vertical and horizontal alignment to lines and grades indicated in the contract.
3. Records of all stones on-hand and placed to date.
4. Records of all loads that have been rejected.
5. Records of all surveys performed.
6. Daily inspection reports of wire ropes.

19:01.5 OFF-LOADING FACILITIES:

The Contractor shall determine the means to receive material at the project site but will be subject to the approval of the Project Manager prior to implementation. The Contractor will be responsible for ensuring that any surrounding waterways and beaches adjacent to the site are not duly compromised or obstructed in conjunction with the receiving area. The Contractor is responsible for coordinating with local agencies and the Coast Guard if delivery of construction material by water is utilized and must submit an off-loading plan 14 days prior to the start of construction of any facility. The Contractor is responsible for compliance with all U.S. Coast Guard regulations. The Contractor is responsible for the protection of roads and utilities in the off-loading, hauling, and construction areas, and for coordinating this protection with local agencies and entities.

For each active work location the Contractor shall be permitted to haul and temporarily stockpile at an upland location above the mean high water line within the defined construction limits (see subsection 11:21) no more than the amount of stone required to construct/reconstruct the seawall for five (5) working days or 3,500 tons, whichever is less, at any given time through the project duration unless otherwise directed by the Project Manager or his representative. The height of each stockpile shall not exceed eight (8) feet or the height of two (2) armor cap stones stacked atop one another, whichever is less. The stockpiles for each stone type shall not be intermingled and shall be confined to an overall area measuring 100 feet wide by 150 feet long within the 600' long progressing construction work area as demarcated by construction fencing. The stockpiles shall be relocated as necessary to remain within the progressing construction area.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

19:02.1 REHANDLED STONE:

19:02.1a General:

The Contractor shall be responsible for all arrangements including right-of-ways, transportation of stone, stockpiling and sorting of stone to supply stones for this project of the weight, size, and quality specified herein. Inspection for acceptance of individual stones will be at the construction site.

19:02.1b Acceptability of Rehandled Stone:

The acceptability of stones for reuse in the structure will be determined by weight and inspection. Each stone accepted for reuse shall be composed of hard, strong, durable materials that will not slake or deteriorate on exposure to the action of water or the atmosphere, shall not contain cracks, joints, faults, seams or bands of minerals or deleterious materials which would result in breakage or reduction of specified stone weights or dimensions during or after placement in the seawall, and shall be free of expansive or other materials which would cause accelerated deterioration by exposure to project climatic conditions. Stones exhibiting weak or inferior appearing portions of any non-uniform type stone, such as igneous flow breccias, volcanic breccias, cataclastic metamorphics or irregularly cemented sedimentaries, will be rejected as unsatisfactory for seawall construction.

Acceptable stone shall have at least 75% of its surface area free of grout, with thickness of any remaining attached grout not exceeding one inch in any section. Each stone shall be clean and angular, and the longest dimension of any stone shall not exceed three times its shortest dimension. A stockpile of stone that meet the requirements described herein shall be created at the work site for sorting by weight.

19:02.1c Measurement of Rehandled Stone:

The Contractor shall stockpile stone taken from the existing structure, which meet the criteria described in Section 19:02.1b above. These stones will be weighed on-site by scales for acceptability for use in the new structure that meets the stone weight requirements as per Section 19:02.3.

The scales shall be certified for accuracy by a properly accredited official. A certified Weigh Master shall operate the scale. Additional methods for determining the weight of stone may be requested by the Contractor and submitted to the Project Manager for his approval. Scales shall be re-certified every six months or when they have been moved or if any disturbance may have altered the accuracy. Scales shall have printers that indicate Gross, Tare and Net weights. This ticket shall be signed by the Project Manager or his representative. The scale used at the site will be certified by the manufacturer or by the certified Weigh Master. Excessive sand shall not be permitted during

19:00 STANDARDS FOR JETTY STONE

the weighing operation. The Bureau's Inspector may require excess sand removed with the stone to be reweighed should, in his sole opinion, the quantity of stone contain excessive sand.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

19:02.2 QUARRY STONE:

19:02.2a General:

Quarry stone shall be supplied so that total stone amounts meet the gradation and quantity required for completion of the structure. The Contractor shall be responsible for all arrangements for right-of-ways, for adequate investigation and exploration, and for selection, development, and operation of the quarry to supply stones of the weight, size, and quality specified herein.

19:02.2b Sampling, Testing and Acceptance of Quarry Stones:

The acceptability of stones will be determined by laboratory tests, geologic examination, and service records. When satisfactory test and service records are not available, the proposed stones must be subjected to all of the following tests and as are necessary to determine that the stones are durable and suitable for use in the work.

Tests to which the stones must be subjected include specific gravity, absorption, abrasion, accelerated expansion, wetting and drying, and such other tests as may be necessary. Testing to determine conformance with the requirements of Section 19:02.2d for acceptance or rejection of stones proposed for use by the Contractor and to determine stone classification will be performed by a certified testing laboratory. No tests will be performed by the laboratory prior to award of the contract.

Immediately after award of contract, and within 5 days of receipt of Notice to Proceed, The Contractor shall submit to the Project Manager for approval all pertinent test and service records from his quarry from the past year. Such tests and service records will be evaluated to help determine if stones from the source can meet quality standards as hereinafter specified.

Should the Contractor's documentation not include previous satisfactory laboratory test results or satisfactory service records from previous projects undertaken by the Bureau, or fail to satisfy the Project Manager, samples of the stones proposed for use in the seawall construction shall be selected in the presence of the Bureau Inspector and delivered by the Contractor to the certified testing laboratory for testing. These samples shall be selected and delivered to the laboratory within 20 days after receipt of notification of insufficient or unsatisfactory test and service records.

Samples of stones shall consist of 5 to 10 pieces with a total weight of approximately 500 pounds. No single piece shall weigh more than 100 pounds. The presence of the Project Manager or his representative during selection of samples of stones will not relieve the Contractor of the responsibility to secure representative samples from the quarry for testing. The initial sample will be tested at the Contractor's expense.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

19:02.2 QUARRY STONE:

19:02.2b Sampling, Testing and Acceptance of Quarry Stones Con't:

In the event the sample fails to pass the required tests, subsequent tests will be conducted at the Contractor's expense. The Contractor will be notified of the results of all additional laboratory tests. Satisfactory Contractor documentation or laboratory test results on stone samples will not constitute approval of all rock in the quarry and will not in any way change the Contractor's responsibility for obtaining, developing, and maintaining a satisfactory source of stones. Throughout the duration of this contract, the Bureau may sample and test stones delivered to the site and proposed for use in the seawall construction. No contract extension will be granted for specified submittal and testing time or because materials failed to meet the specification requirements. Stones failing to meet specified requirements will be removed from the off-loading facility or construction site at no additional cost to the Bureau. No materials or stones shall be placed in the seawall until those materials or stones have been approved for use. The Contractor shall furnish waybills and delivery tickets for each load of stone delivered to the site.

19:02.2c Quarry Stone Weights:

The Contractor shall have scales at locations where quarry stone is delivered to the project site. The scales shall be certified for accuracy by a properly accredited official. A certified Weigh Master shall operate the scale. Scales shall be re-certified every six months or when they have been moved or if any disturbance may have altered the accuracy. Scales shall have printers that indicate Gross, Tare and Net weights. This ticket shall be signed by the Project Manager or his representative.

In the event that the Contractor proposes to deliver stone to the work location by barge, the Bureau will accept barge weight tickets. The scale at the quarry will be certified by the manufacturer or by the certified Weigh Master. Additional methods for determining the weight of stone may be requested by the Contractor and submitted to the Project Manager for his approval.

19:02.2d Quarry Stone Quality:

Each stone accepted for use in the seawall shall be composed of hard, strong, durable materials that will not slake or deteriorate on exposure to the action of water or the atmosphere, shall not contain cracks, joints, faults, seams or bands of minerals or deleterious materials which would result in breakage or reduction of specified stone weights or dimensions during or after placement in the seawall, and shall be free of expansive or other materials which would cause accelerated deterioration by exposure to project climatic conditions.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

19:02.2 QUARRY STONE:

19:02.2d Quarry Stone Quality Con't:

Each stone must have sufficiently uniform physical properties throughout so that all portions of the stone will meet the specified test requirements. Weak or inferior appearing portions of any non-uniform type stone, such as igneous flow breccias, volcanic breccias, cataclastic metamorphics or irregularly cemented sedimentaries, will be subjected to all testing necessary to determine that the stone will not be susceptible to splitting or differential weathering. Any stone containing an inferior rock material portion that does not meet the specified test requirements will be rejected as unsatisfactory for seawall construction. Each stone shall be clean and angular, and the longest dimension of any stone shall not exceed three times its shortest dimension. Each stone shall meet all the following test requirements for quality.

<u>Test</u>	<u>Requirement</u>
Unit Weight	Dry unit weight as specified in Table 1 herein
Absorption	Less than 1 percent
Sulfate Soundness	Less than 5 percent loss
Glycol Soundness	No deterioration except minor crumbs from surface
Abrasion	Less than 20 percent loss for 500 revolutions
Freezing-Thawing	Less than 10 percent loss for 12 cycles
Wetting-Drying	No major progressive cracking
Drop Test	No breakage or cracking
Set Aside	No breakage or cracking after one season cycle

19:02.2e Quarry Stone Testing:

The following tests shall be performed by a certified testing laboratory at the Contractor's expense. The test results reported by the laboratory will be considered as exact results for unit weight, absorption, abrasion, wetting and drying, accelerated expansion or other necessary tests, regardless of any permissible variance that may be established by test procedures, in determining the acceptability of groin stone furnished under this contract. Test procedures to be utilized will be as follows:

1. Unit Weight and Absorption:

The unit weight, or weight per cubic foot, shall be determined by multiplying the bulk-saturated-surface-dry specific gravity (BSSD) times 62.4 pounds per cubic foot. Specific gravity and absorption shall be determined in accordance with the Corps of Engineers testing procedure CRD-C 107-69, "Standard Method of Test for Specific Gravity, Absorption, and Unit Weight of Coarse Aggregate and Riprap", modified as follows: The test sample shall consist of about 5,000 grams of generally cubical pieces of stone passing the 2-inch and retained on the 1-1/2-inch standard square mesh sieve sizes. The test pieces shall be laboratory prepared by jaw crushing or chipping.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

19:02.2 QUARRY STONE:

19:02.2e Quarry Stone Testing Con't:

2. *Soundness:*

Tests that subject the rock to severe chemical treatments are intended to reveal weaknesses in a shortened time frame. The dissimilarity in comparison to natural weathering is sometimes a source of concern in translating laboratory results into estimates of stone performance. Both tests below are relatively simple and inexpensive.

a. *Magnesium Sulfate:*

Standardized testing follows CRD-C 137, a method developed for evaluating aggregate. Samples soaked in a sulfate solution will break apart when the solution invades weak planes or cracks and then crystallizes upon heating and drying. A major shortcoming of this test for large stone is that the test specimens are broken from the large stone to a weight approximately 100 grams each. The breakage and segregation will eliminate weak areas when preparing the sample, and test results tend to be too favorable. Nevertheless, a loss exceeding 10 percent generally indicated poor-quality stone. The test is usually meaningful for sedimentary rocks when augmented by an absorption or abrasion test, except for some sandstones.

b. *Ethylene Glycol:*

Standardized testing follows CRD-C 148. This method is used to detect the presence of swelling clay minerals and provides an indication of the severity of deterioration of the stone to be expected in service. Ethylene glycol enters the clay mineral structure and causes rapid expansion. The test has been particularly useful in distinguishing questionable varieties among altered basaltic rocks.

3. *Abrasion:*

The Los Angeles abrasion test follows method CRD-C 145. The test is useful in determining the resistance of stone to abrasion and battering and also provides an index of toughness, durability, and abundance of incipient cracks. The significance of the test for large stone is indefinite since individual test pieces are limited to about 100 g in weight. Weaknesses along widely spaced surfaces are missed in this test. Roughly, losses less than 20 percent for 500 revolutions are generally considered satisfactory while losses exceeding 40 percent suggest probable poor service. The test is sometimes effective for evaluating metamorphic rock, particularly when supported by absorption and sulfate soundness tests.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

19:02.2 QUARRY STONE:

19:02.2e Quarry Stone Testing Con't:

4. Freezing-Thawing:

Method:

The standard method follows CRD-C 144, but modifications for large slabs cut perpendicular to bedding or for whole large stones are preferred by some laboratories because of better representation. Large-stone testing is discussed at length in Evaluation of Quality and Performance of Stone as Riprap or Armor. Regardless of details, a consistency in procedure is desirable, at least within a division laboratory and its service area. The test simulates the effects of a cold environment by inducing numerous cycles of freezing and thawing through a bath of water and alcohol. Again, the number of cycles to which, the specimen is subjected and the overall interpretation of the results should be determined on a district or laboratory basis. The number of cycles commonly exceeds 10, occasionally going to 50 or more, depending upon local climate or established method. Failures along weak surfaces should be given special attention since their impact is easily underestimated.

Evaluation:

For small pieces wherein bedding and jointing are insignificant, a loss of 10 percent by testing CRD-C 144 should cause concern. Large stones and slabs losing more than 25 percent during 12 cycles will probably not perform well in service. Large stones losing no more than 10 percent commonly do perform satisfactorily. The effects of geological structure and other important characteristics of a material are less likely to be overlooked when at least three specimens are tested simultaneously in the same test bath.

5. Wetting and Drying:

The test sample, consisting of approximately 10 pounds of 2-inch to 1-1/2-inch pieces, will be prepared as specified above for unit weight and absorption tests. The test sample will be oven-dried and weighted then soaked for 24 hours prior to starting tests. Testing will consist of soaking 3 hours in tap water at approximately 60 degrees F and drying for 3 hours with an infrared heat lamp so that surface temperature of rocks will reach 165 degrees F. Upon completion of the test, samples will be oven-dried, screened over 1-1/2-inch sieve and weighed. Percent loss will be computed based on original dry weight.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

19:02.2 QUARRY STONE:

19:02.2e Quarry Stone Testing Con't:

6. *Drop Test:*

Method:

A drop test provides an immediate evaluation of the suitability of very large stone material and is also potentially useful for quality control and QA. For comparability, the test stone(s) should be dropped from a bucket or cherry picker, or by other means from a height half the average diameter of the stone onto a rigid surface or second stone of comparable size. Dumping with other stones from a haulage truck is usually an unsatisfactory practice.

Evaluation:

The stone should be examined carefully before testing as well as afterward. Failure criteria are development of new cracks, opening of old cracks, and loss of small pieces from the surface.

7. *Set Aside:*

The set-aside test is a particularly good method of forewarning of future problems with stone deterioration. Typically, large stones are set aside in the quarry and immediately examined and photographed. These specimens are examined and photographed again after a predetermined period of exposure. Stone that endures without signs of deterioration may be considered for acceptance. Observations from set-aside exposure are potentially useful in identifying materials in need of curing. The one disadvantage of this test is the long exposure period required, that is, preferably a year or more.

19:00 STANDARDS FOR JETTY STONE

19:02 PART 2 PRODUCTS

19:02.3 STONE CLASSIFICATION:

19:02.3a Gradation:

1. Stones for seawalls shall have a minimum weight and density as identified in the table below. All stones shall be within 25% of the specified weight, with at least 50% of the stones exceeding the specified weight.

TABLE 1 - STONE SPECIFICATIONS

Classification	Stone Type	W50	Range	Density
Class I	Cap Stone	5.6 ton	4.2 – 7 ton	185 lb./cu.ft.
Class II	Core Stone	1,120 lbs	840 – 1,400 lbs	175 lb./cu.ft.
Class III	Mat Stone	56 lbs	42 – 70 lbs	175 lb./cu.ft.
Class IV	Choke Stone	varies as needed	varies as needed	175 lb./cu.ft.

2. Stone material may contain up to 5 percent by weight of air-dried rock fragments, spalls, and dust. In computing percentages by weight of stones in the required gradations, the weight of a particle weighing less than the permissible minimum stone size shall not be included in the total weight.

3. The Engineer may inspect the gradation of the stone by visual inspection at the project site. For each stone size shown on the Contract Drawings, except for the armor layer stones, provide samples of rock at the site of at least 5 tons for inspection. For armor layer stone, provide samples of at least 6 stones at the site. These samples shall be used as a reference for judging the size and gradation of the rock supplied and placed. The samples may be incorporated into the work after inspection.

4. Provide all equipment, labor, and the sorting site to verify the stone gradation at no expense to the Owner.

19:02.3b Re-breaking Stone:

No acceptable armor stone that can be placed with the stone-handling equipment shall be re-broken.

19:02.3c Handling Breakage:

If any armor stone is broken in handling after being weighed, the broken

19:00 STANDARDS FOR JETTY STONE

pieces may, upon approval by the Project Manager, be reclassified and placed in a lower weight class stone if they meet the requirements for that class stone.

19:00 STANDARDS FOR JETTY STONE

19:03 PART 3 EXECUTION

19:03.1 STRUCTURE DISMANTLING/DEMOLITION

19:03.1a Removal, Disposal, Sorting, and Storage of Existing Stone:

Existing stone shall be removed in accordance with the project plans and stored in an on-site approved by the Project Manager. Sorting of stone shall be performed using visual inspection and measurement of stone weight as described in Section 19:02.1. The visual inspection and weighing shall be performed by the Contractor, with the Project Manager, or his representative accompanying the Contractor during this process.

Stones that do not meet the criteria defined in Section 19:02.1 shall be removed from the work site and disposed of by the Contractor at his expense at an approved disposal location. All disposal shall be coordinated with the Project Manager and shall be accomplished in accordance with all Local, State and Federal Regulations.

19:03.1b Removal of Existing Grout from Seawall Crest & Capstone:

Contractor shall remove and dispose of all concrete grouting between armor capstones. The procedure for grout removal shall be approved by the Project Manager prior to the commencement of demolition and shall be accomplished in accordance with all Local, State and Federal Regulations. Steps shall be taken to ensure that loss of grout into the surrounding water and beach is minimized. Disposal of removed grout shall be coordinated with the Project Manager.

19:00 STANDARDS FOR JETTY STONE

19:03 PART 3 EXECUTION

19:03.2 PLACEMENT:

19:03.2a General:

1. Stone shall be placed in a manner to produce a well-graded mass without causing displacement of the underlying material. The finished surface shall be free from pockets of small stones and clusters of large stones. Place stone so as to avoid stretching and subsequent tearing of the mattress and/or filter fabric.

2. The stone shall be delivered and placed in such a manner that will insure that the stone in-place will be reasonably homogenous, with the larger rocks uniformly distributed and firmly interlocked, and the smaller rocks and spalls filling the voids between the larger rock. Construct the Seawall within the specified tolerances of the lines and grades shown on the construction drawings or staked in the field.

3. Provide and set grades at intervals not to exceed 25-foot centers longitudinally and at all points of grade change transversely. A tolerance of plus 4 inches from the thicknesses shown on the drawings will be allowed in the finish surfaces of each layer of the Seawall. The intent of these Specifications is to require placement of each layer of the Seawall to the thicknesses shown. No minus tolerance will be permitted.

4. Place stone in such a manner as to avoid displacing or damaging the mattress and/or filter fabric and to minimize segregation of the stone. Do not operate equipment directly on the mattress or filter fabric. Any mattress or filter fabric damaged beneath the overlying material shall be uncovered as necessary and replaced at no cost to the Owner.

5. The finished stone shall be free from objectionable pockets of small stones and clusters of larger stones. The desired distribution of the various sizes of stones throughout the mass shall be obtained by selective loading of material at the source and/or by controlled placing of successive loads during the final placing. Dumping of stone at the top of slopes and rolling or pushing into place will not be permitted. Rearranging of stones by the use of a "Gradall" or similar piece of mechanical equipment or by hand may be required to obtain a well graded distribution of stone sizes.

19:03.2b Core Layer and Sublayer:

Stone shall be placed by equipment on the surfaces and to the depths specified. The drop height of the core stone unto the mattress and/or mat stone shall be limited to 2 feet. The stone shall be installed to a full course thickness at a time, in one operation and in such a manner to avoid displacement and/or damage of the underlying mattress and/or filter fabric.

19:00 STANDARDS FOR JETTY STONE

19:03 PART 3 EXECUTION

19:03.2 PLACEMENT:

19:03.2c Armor Layer:

1. This application shall involve the placement of large, flat rock stone against the slope in such a manner that the rock stone "paves" the slope, and resulting stone pieces resemble a "puzzle". All rock shall have maximum contact with adjacent rocks and the sublayer, without bridging or otherwise creating a void under the rock layer.

2. All rock sections are to be built starting from the toe of the structures up to the crest.

Each rock shall be placed with the minimum dimension parallel to the surface upon which it is set. The longest rock dimension shall be placed perpendicular to the slope.

3. Place rock against the adjoining stones in close contact. On the top surface of the structure spaces between the larger rocks shall be chinked with smaller rock within the specified gradation and broken up pieces of grout removed from the existing seawall, with no voids greater than 12 inches existing in the finished stone face. On the side slopes of the structure every attempt shall be made to keep void spaces less than 12 inches by selectively placing armor stone.

4. Place rock against the adjoining stones in close contact.

5. Small rocks shall not be grouped as a substitute for a larger rock.

6. Finishing of the slopes shall be accomplished as the material is being placed. The finished surface shall have uniform appearance of well graded material. Maintain the Seawall until accepted by the Engineer and replace any material displaced by construction operations.

19:03.3 STONESETTER:

The Contractor will have stone placement accomplished by a qualified stone setter having demonstrated experience, to the satisfaction of the Project Manager, in the construction of rubble-mound rock coastal structures. The qualified stone setter shall have no less than five (5) years and/or three (3) projects experience setting stone of similar stone size and project template scope. It is the responsibility of the Contractor to submit to the Bureau for approval the stone setter's qualification, with specific projects and scope of work experience at least 14 calendar days prior to the setting of stone. Failure to do so could result in rejection and removal of work at no additional cost to the State of New Jersey.

19:00 STANDARDS FOR JETTY STONE

19:03 PART 3 EXECUTION

19:03.4 STONE PLACING EQUIPMENT:

All equipment for lifting and placing should be load tested. The equipment shall be capable of placing stone in such a manner as to produce a well-keyed mass without damage. Stone placing equipment shall have adequate safe capacity to construct the structure to the lines, grades, and slopes indicated on the drawings.

Mats are required under all moving cranes, etc. Temporary filling of voids with sand or stone will not be permitted. All stone cracked by equipment riding over them shall be removed if the cracked pieces do not meet the required

19:03.4 STONE PLACING EQUIPMENT con't:

weights. The method of placement shall provide means of turning all stones placed in the seawall at least 90 degrees in the horizontal plane and for vertical rotation, to the extent necessary for final positioning. A representative of the Bureau shall be permitted to ride in the cab of the stone placing equipment in order to view the operation for positioning of individual stones.

19:03.5 TOLERANCES:

19:03.5a Armor Capstone Placement:

Placement of armor capstone will not deviate from the lines and slopes shown on the project plans by more than plus 0 inches or minus 12.0 inches, except that exceeding a 9 inch total variation will not be allowed on the exposed surface of adjacent stones.

The extreme limits of tolerance shall not be continuous over a distance greater than 20 feet by 20 feet, or 400 square feet. The Contractor shall provide interim cross-section verification at 10' intervals for every 100 feet of completed seawall, or on a monthly basis, whichever is less elapsed time. If the 9 inch tolerance between adjacent stones; the maximum tolerance of minus 12 inches; or the plus 0 inch tolerance have been exceeded; or if the final elevation of any stone across the seawall crest is lower by 1.0 inch, the Contractor, at his expense, shall remove and replace the stone to remain within the allowed tolerances except as modified by the Project Manager.

19:00 STANDARDS FOR JETTY STONE

19:03 PART 3 EXECUTION

19:03.5b FINAL TOLERANCE SURVEY:

A survey of the structure shall be taken 30 days after the completion of the placement of the armor capstone to ensure that the tolerances stated herein are still met. If any of the tolerances along the length of the constructed structure has not been met, the Contractor, at his expense, shall remove and replace the necessary portions of the structure to remain within the allowed tolerances except as modified by the Project Manager.

The final as-built survey shall be conducted in accordance with the Section entitled "Surveys."

Only after the stated tolerances have been met, as determined by surveys, shall permission be granted the Contractor by the Project Manager to proceed with the application of the cement-silicate grout.

-- End of Section 19:00 --

24:00 STRUCTURES MONITORING

24:01 PART 1 - GENERAL:

24:01.1 SCOPE OF WORK:

The work covered under this section consists of furnishing all labor, materials, plant and equipment, and performing all operations required to monitor structures for potential effects of contract work.

24:01.2 QUALIFICATIONS:

The person responsible for developing and implementing the structures monitoring program shall be a Professional Engineer licensed in the State of New Jersey with a minimum of 5-years of experience in seismic monitoring of the same type and scope to this monitoring work. All submittals required under Section 24:00 shall be prepared by, signed by, and bear the seal of the aforementioned Engineer.

24:01.3 SUBMITTALS:

24:01.3a Submittals (Pre-Construction):

All pre-construction submittals shall be submitted to the Bureau for approval at least 30 days prior to mobilization to the contract work site.

1. Qualifications: The qualifications of the Professional Engineer licensed in the State of New Jersey, including a copy of their license, proposed to develop and conduct the structures monitoring shall be submitted.
2. Letter to Owner: The proposed letter to the owners of the monitored structures shall be submitted for approval by the Project Manager. See Section 24:03.2 for further details.
3. Plan for Pre and Post Construction Surveys: The contractor shall submit, for approval, the proposed plan for conducting pre and post construction surveys. Included in the plan shall be the locations and owners of the structures to be surveyed and the methods used for surveying in order to ensure compliance with the pre and post construction survey requirements below.
4. Structures Monitoring Plan: The contractor shall submit, for approval, a structures monitoring plan describing all personnel, materials, equipment and methods to be employed to monitor the effects of contract operations on existing structures. The plan shall include the qualifications of the personnel developing the monitoring plan and conducting the monitoring, the frequency of monitoring during each phase of construction, the maximum allowable vibration level, and a contingency plan if that vibration level is approached, including a list of recommended actions to be implemented by the Contractor to reduce vibrations to within acceptable limits.

24:00 STRUCTURES MONITORING

24:01 PART 1 - GENERAL:

24:01.3 SUBMITTALS:

24:01.3a Submittals (Pre-Construction) Con't:

5. Pre-Construction Survey: Once the Pre-construction Survey Plan has been approved by the Project Manager, the Contractor shall conduct a thorough pre-construction survey of the interior and exterior of all the structures within the monitoring limits, including the foundations of same. The surveys shall include, but not be limited to, taking digital photographs and video of all exterior faces of the structures, recording the type of structures and their construction, recording overall interior and exterior conditions, recording specific interior and exterior distress areas (with close-up photos), including, but not limited to, measuring and recording the location, width and length of existing interior and exterior cracks, details of any other pre-existing damage, and any and all additional information as required.

24:01.3b Submittals (During Construction):

The Contractor shall submit, for approval, monitoring reports. Reports of the monitoring shall be submitted electronically within five (5) business days following the actual monitoring, and include details of where and when the monitoring was performed, the frequency and peak particle velocities of vibrations, the limiting criteria, and any other pertinent information.

24:01.3c Submittals (Post-Construction):

Post-Construction Survey: Within 30 days of demobilization of each section of work by the Contractor, the Contractor shall conduct a thorough post-construction survey of the interior and exterior of all the structures within the monitoring limits, including the foundations of same. The surveys shall include, but not be limited to, taking digital photographs and video of all exterior faces of the structures, recording the type of structures and their construction, recording overall interior and exterior conditions, recording specific interior and exterior distress areas (with close-up photos), including, but not limited to, measuring and recording the location, width and length of existing interior and exterior cracks, documenting details of any changes to pre-existing damage or new damage, if any, and any and all additional information as required.

24:01.4 MEASUREMENT AND PAYMENT:

No separate measurement or payment will be made for the work specified in this section and all costs in connection therewith shall be included in the lump sum price bid under Item No. 3 "Structure Monitoring."

24:00 STRUCTURES MONITORING

24:02 PART 2 - PRODUCTS:

n/a

24:03 PART 3 - EXECUTION:

24:03.1 OBJECTIVE:

The objective of this Section is to predict and prevent any damage to existing structures resulting from the operations of this contract. Any damage to structures resulting from the Contractors operations shall be the responsibility of the Contractor.

24:03.2 COORDINATION:

After approval of the monitoring plan by the Bureau, and before work begins at the site, the Contractor shall draft a letter to the owners of the all structures within the monitoring limits to inform them of the methods of construction to be used for this contract, the hours of operation, and the content of the monitoring plan. In addition, the Contractor shall explain to the owners that people may "experience" vibrations at levels much lower than vibration levels that would damage structures.

Upon approval of this letter by the Government, the Contractor shall disseminate the letter.

If the Contractor does not receive a response within a week of issuance, they shall issue a secondary letter informing the structure owner that should they not respond and coordinate within a week, the Contractor shall conduct an exterior inspection from a permissible distance (roadside, street end, adjacent property with permission granted).

The Contractor shall also be required to attend a public meeting for each municipality, which will be coordinated, planned, and conducted by the Bureau.

24:03.3 DESCRIPTION OF STRUCTURES:

The structures to be monitored shall be all structures located within a 100-foot radius of the landward-most limit of stone construction. The contractor shall not be required to provide monitoring for structures within 100 feet of the If-and-Where groin sealing and grout-bag repairs, unless otherwise requested by the Bureau. The types of structures to be monitored include residential homes, businesses and attached decks. In addition, any in-ground pools, within the monitoring limits, shall also be monitored as well as the pedestrian bridge located within the work area for Section 1. Sheds and detached garages shall not be included in the structures monitoring.

24:00 STRUCTURES MONITORING

24:03 PART 3 - EXECUTION:

24:03.4 MAXIMUM ACCEPTABLE VIBRATION LEVELS:

The maximum acceptable vibration level shall be determined by the Structures Monitoring Engineer and shall be based upon the Report of Investigation RI - 8507 entitled "Structure Response and Damage Produced by Ground Vibrations from Surface Mine Blasting," published by the United States Bureau of Mines, latest edition.

24:03.5 MONITORING:

Monitoring shall include the daily use of a seismograph at representative structures located within the limits outlined in Section 24:03.3 throughout the Contractor's entire construction operation, including mobilization and demobilization.

The seismographs shall be placed at locations on or at the base of the beachfront structures to obtain the highest peak particle velocities. Representative structures shall be defined as one of each foundation type (pile foundation, masonry, concrete, slab on grade). Not less than three structures within each active work area and one for each active staging area shall be monitored.

If the maximum acceptable vibration level threshold is approached, the engineer shall immediately notify the Project Manager, or his onsite representative, and direct the Contractor to immediately begin implementation of contingency measures to reduce vibrations to within acceptable means.

24:03.6 EXCEEDING ACCEPTABLE VIBRATION LEVELS:

If the maximum acceptable vibration level threshold is exceeded, the following actions shall be undertaken:

1. The Contractor shall immediately cease any activity that results in peak particle velocities greater than the maximum acceptable vibration level.
2. The Structures Monitoring Engineer shall immediately report to the project site to oversee continuous monitoring. The Structures Monitoring Engineer shall review the contingency plan included in the Structures Monitoring Plan and make any necessary revisions, adjustments and/or recommendations based upon current construction activities and site conditions. Based upon the revised latest contingency plan, the Structures Monitoring Engineer shall prepared a prioritized list (based on ease of implementation and impact on construction activities) of successive actions to be implemented by the Contractor to reduce vibrations to within acceptable limits. The Structures Monitoring Engineer shall remain onsite, on a continual basis, during the Contractor's normal work hours until he/she determines that vibration levels have been reduced to within acceptable limits.

24:00 STRUCTURES MONITORING

24:03 PART 3 - EXECUTION:

3. The Contractor shall immediately begin implementation of the measures recommended by the Structures Monitoring Engineer as outlined above. Successive contingency measures shall be undertaken by the Contractor until the Structures Monitoring Engineer determines that vibration levels have been reduced to within acceptable limits. Any and all such measures required to reduce vibration levels must be undertaken by the Contractor at no cost to the State of New Jersey.

24:03.6 EXCEEDING ACCEPTABLE VIBRATION LEVELS Con't:

4. Should any construction activity impact a structure, as reported by a property owner or as determined by the Structures Monitoring Engineer, the aforementioned engineer will re-inspect the structure(s) and report the findings, including digital images, to the Project Manager via compact disk no later than one day following the re-inspection.

--END OF SECTION 24:00--

25:00 BEACH GRASS

25:01 PART 1 – GENERAL

25:01.1 SCOPE OF WORK:

Work under this Item shall consist of the furnishing and planting of the Cape variety American Beach Grass (*Ammophila breviligulata*) in the areas indicated on the project plans, specifications and as further specified herein. The contractor shall guarantee survival of the vegetation planted through the first growing season.

25:01.2 MEASUREMENT AND PAYMENT:

All costs associated with beach grass plantings shall be measured and paid for in accordance with Section 11:00 of the Specifications.

25:01.3 SUBMITTALS:

25:01.3a Nursery:

The Contractor shall notify the Project Manager of the name and the location of the nursery at least 45 days prior to any beach grass being furnished under this contract. The Project Manager reserves the right to inspect said site(s) and select representative sample specimens of sand for additional testing.

25:01.3b Delivery Records:

Field inspect and submit all material records and transport receipts / tickets.

25:02 PART 2 PRODUCTS

25:02.2 BEACH GRASS:

25:02.2a Vegetation:

All specified plant stock shall be nursery grown, "Cape" variety American Beach Grass free of injuries, insects, pests and plant diseases. Each planting unit shall consist of two to three healthy culms. Plants which are damaged will not be accepted. Each plant shall arrive at the planting site in a dormant state and be cut to an 18-inch length. All stock shall be strong, healthy and possess well-formed, vigorous rooting nodes. All stock shall be protected from wind damage during transit and handling by use of a lightweight canvas or other suitable means. Stock shall be packed with moss, straw, hay or otherwise protected to assure retention of proper moisture conditions during transit and storage. The roots are to be kept moist and otherwise protected at all times.

25:00 BEACH GRASS

25:02 PART 2 PRODUCTS CON'T

25:02.2b Fertilizer:

The fertilizer shall consist of a nitrogen/phosphorus/potassium ratio of 30-10-0, 16-8-8 or 10-10-10. The rate of application shall be no less than 1 lb. per 1,000 square feet per application.

25:03 PART 3 EXECUTION

25:03.1 PLANTING PROCEDURES:

1. All "Cape" American Beach Grass plantings shall occur between November 1 and March 30, provided the plants are in a dormant state, within the areas indicated on the project plans, specifications and as further directed by the Project Manager. No planting shall be done, within the above time frame, during adverse weather or soil conditions, such as extreme heat or cold, frozen or saturated sand.

2. Fresh plant stock, as discussed above, shall be used and the plants cut back to 16-18 inches long.

3. Vegetation shall be planted in alternating rows, approximately parallel to the shore line. All planting spacing within the row shall be on 18 inch centers, where wind erosion is severe the project engineer may require planting spacing to be 12 inches apart. An 18-inch by 18-inch spacing will require approximately 58,000 culms per acre or 1,350 culms per 1,000 sq. ft.

4. Plant 2 to 3 stems or culms per hole 8 to 10 inches deep with the surrounding sand firmly tamped to eliminate any air pockets. The culms and roots must be kept moist before and during planting.

5. Broadcast fertilizer with the type and rate discussed above. Fertilizer shall be applied in three applications. One in spring during the month of April, one in early summer during the month of June and one in late summer in the establishment year. The rate of application shall be no more than 1 lb. per 1,000 square feet per application.

25:03.2 VEGETATION SURVIVAL:

The contractor shall guarantee a survival rate of 85 percent of the vegetation planted, within 1,000 square feet sections, through the first growing season. The Bureau shall evaluate the project site by early fall following planting to determine the survival rate of the planted vegetation. If the survival rate is less than 85 percent, the contractor, at their expense, shall replant all the vegetation that did not survive. The replanting shall done in accordance with the above specification and be completed within 30 calendar days.

-- End of Section 25:00 --

28:00 **GEOTEXTILE**

28:01 **PART 1 - GENERAL**

28:01.1 **SCOPE OF SECTION**

The work covered by this section consists of furnishing all labor, material, and equipment, and performing all operations required for providing geotextile under the proposed stone work as indicated on the contract drawings.

Note: The Geotextile supplied shall be nonwoven fabric that meets or exceeds the specifications in Table 1 of Section 28:02.1. For bidding purposes, Mirafi 180N nonwoven geotextile is an acceptable product, or approved equal.

28:01.2 **REFERENCES**

The publications listed below form a part of the specification to the extent referenced. The publications are referred to in the text by basic designation only.

ASTM INTERNATIONAL (ASTM) - LATEST EDITION

ASTM D 3786	Hydraulic Bursting Strength of Knitted Goods & Nonwoven Fabrics - Diaphragm Bursting Strength Tester Method
ASTM D 4354	Sampling of Geosynthetics for Testing
ASTM D 4355	Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D 4491	Water Permeability of Geotextiles by Permittivity
ASTM D 4533	Trapezoid Tearing Strength of Geotextiles
ASTM D 4632	Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	Determining Apparent Opening Size of a Geotextile
ASTM D 4759	Determining the Specification Conformance of Geosynthetics
ASTM D 4873	Identification, Storage, and Handling of Geosynthetic Rolls and Samples
ASTM D 6241	Standard Test Method for Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe

28:01.3 **SUBMITTALS**

28:01.3a **Product Data:**

1. Thread: A minimum of 7 days prior to scheduled use, proposed thread type for sewn seams along with data sheets showing the physical

28:00 GEOTEXTILE

28:01 PART 1 - GENERAL

28:01.3 SUBMITTALS Con't:

properties of the thread.

2. Geotextile Samples: A minimum of 7 days prior to scheduled use, a sample of the material shall be submitted and an additional 7 days shall be allotted in the schedule to allow for quality assurance testing.
3. Geotextile Certificates: A minimum of 7 days prior to scheduled use, manufacturer's certificate of compliance stating that the geotextile meets the requirements of this section. For needle punched geotextiles, the manufacturer shall also certify that the geotextile has been continuously inspected using permanent on-line full-width metal detectors and does not contain any needles which could damage other geosynthetic layers. The certificate of compliance shall be attested to by a person having legal authority to bind the geotextile manufacturer. Certificate shall be a statement signed by an official authorized to certify on behalf of the manufacturer of the geotextile, attesting that the product meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.

28:01.4 DELIVERY, STORAGE AND HANDLING:

All delivery, storage, and handling of geotextile shall conform to ASTM D 4873.

28:01.4.1 Delivery:

The Project Manager shall be notified a minimum of 24 hours prior to delivery and unloading of geotextile rolls. Rolls shall be packaged in an opaque, waterproof, protective plastic wrapping. The plastic wrapping shall not be removed until deployment. If quality assurance samples are collected, rolls shall be immediately rewrapped with the plastic wrapping. Geotextile or plastic wrapping damaged during storage or handling shall be repaired or replaced, as directed. Each roll shall be labeled with the manufacturer's name, geotextile type, roll number, roll dimensions (length, width, gross weight) , and date manufactured.

28:01.4.2 Storage:

Rolls of geotextile shall be protected from construction equipment, chemicals, sparks and flames, temperatures in excess of 160 degrees F, or any other environmental condition that may damage the physical properties of the geotextile. To protect geotextile from becoming saturated, rolls shall either be elevated off the ground or placed on a sacrificial sheet of plastic in an area where water will not accumulate.

28:00 GEOTEXTILE

28:01 PART 1 - GENERAL

28:01.4 DELIVERY, STORAGE AND HANDLING Con't:

28:01.4.3 Handling:

Geotextile rolls shall be handled and unloaded with load carrying straps, a fork lift with a stinger bar, or an axial bar assembly. Rolls shall not be dragged along the ground, lifted by one end, or dropped to the ground.

28:02 PART 2 - PRODUCTS

28:02.1 GEOTEXTILE

Geotextile shall be a nonwoven pervious sheet of polymeric material and shall consist of long-chain synthetic polymers composed of at least 95 percent by weight polyolefins, polyesters, or polyamides. Stabilizers and/or inhibitors shall be added to the base polymer, as needed, to make the filaments resistant to deterioration by ultraviolet light, oxidation, and heat exposure. Regrind material, which consists of edge trimmings and other scraps that have never reached the consumer, may be used to produce the geotextile. Post-consumer recycled material may also be used. Geotextile shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including the edges. Geotextiles shall meet the requirements specified in Table 1. Where applicable, Table 1 property values represent minimum average roll values (MD) in the weakest principal direction. Values for AOS represent maximum average roll values.

TABLE 1
MINIMUM PHYSICAL REQUIREMENTS FOR SEPARATION GEOTEXTILE

<u>PROPERTY</u>	<u>UNITS</u>	<u>ACCEPTABLE VALUES</u>	<u>TEST METHOD</u>
GRAB STRENGTH	LBS	200	ASTM D4632
SEAM STRENGTH	LBS	180	ASTM D4632
BURSTING STRENGTH	PSI	450	ASTM D3786
PUNCTURE	LBS	450	ASTM D6241
TRAPEZOID TEAR	LBS	70	ASTM D4533
APP. OPENING SIZE	U.S. SIEVE	70-100	ASTM D 4751
PERMITTIVITY	SEC -I	0.7	ASTM D 4491
UV DEGRADATION	PERCENT	50 AT 500 HRS	ASTM D 4355

28:02.2 THREAD:

Sewn seams shall be constructed with high-strength polyester, nylon, or other approved thread type. Thread shall have ultraviolet light stability equivalent to the geotextile and the color shall contrast with the geotextile.

28:00 GEOTEXTILE

28:02 PART 2 - PRODUCTS

28:02.3 MANUFACTURING QUALITY CONTROL SAMPLING AND TESTING:

The Manufacturer shall be responsible for establishing and maintaining a quality control program to assure compliance with the requirements of the specification. Documentation describing the quality control program shall be made available upon request. Manufacturing quality control sampling and testing shall be performed in accordance with the manufacturer's approved quality control manual. As a minimum, geotextiles shall be randomly sampled for testing in accordance with ASTM D 4354, Procedure A. Acceptance of geotextile shall be in accordance with ASTM D 4759. Tests not meeting the specified requirements shall result in the rejection of applicable rolls.

28:03 PART 3 - EXECUTION

28:03.1 SUBGRADE PREPARATION:

The surface underlying the geotextile shall be smooth and free of ruts or protrusions which could damage the geotextile. Any irregularities shall be removed so as to insure continuous, intimate, contact of the geotextile with all the surface. Any loose material, soft or low density pockets of material, shall be removed; erosion features such as rills, gullies, etc. must be graded out of the surface before geotextile placement.

28:03.2 INSTALLATION:

The Contractor shall notify the Project Manager a minimum of 24 hours prior to installation of geotextile. Geotextile rolls which are damaged or contain imperfections shall be repaired or replaced as directed. The geotextile shall be laid flat and smooth so that it is in direct contact with the subgrade. The geotextile shall be placed with the long dimension parallel to the crossover centerline and shall be laid smooth and free of tension, stress, folds, wrinkles or creases. The placement procedures require that the length of the geotextile be slightly greater than the dune cross-over length. The geotextile shall be carried up the sides of the base and infield mix materials and the extra shall be tucked down and covered with sand.

28:03.3 SEAMS:

28:03.3.1 Overlap Seams:

Geotextile panels shall be continuously overlapped a minimum of 24 inches at all longitudinal and transverse joints. Where seams must be oriented across the slope, the upper panel shall be lapped over the lower panel. If approved, sewn seams may be used instead of overlapped seams.

28:00 GEOTEXTILE

28:03 PART 3 - EXECUTION

28:03.3 SEAMS Con't:

28:03.3.2 Sewn Seams:

The stitch type used shall be a 401 locking chain stitch or as recommended by the manufacturer. Seam strength shall meet the minimum requirements specified in Table 1. The thread at the end of each seam run shall be tied off to prevent unraveling. Skipped stitches or discontinuities shall be sewn with an extra line of stitching with a minimum of 18 inches of overlap.

28:03.4 PROTECTION:

The geotextile shall be protected during installation from clogging, tears, and other damage. Damaged geotextile shall be repaired or replaced as directed. Adequate ballast (e.g. sand bags) shall be used to prevent uplift by wind. The geotextile shall not be left uncovered for more than 4 hours after installation.

28:03.5 REPAIRS:

Torn or damaged geotextile shall be repaired. Repairs shall be performed by placing a patch of the same type of geotextile over the damaged area. The patch shall extend a minimum of 12 inches beyond the edge of the damaged area. A nonwoven geotextile shall be patched by either sewing, using one row of a two-thread chain stitch, or, by tack welding the patch to the surrounding undamaged geotextile using a hot-air tack-welding tool such that the patch does not move while backfilling over the geotextile. A woven geotextile shall be patched using a special tape, as recommended by the geotextile manufacturer, made for patching wovens (using a hot-air tack-welding tool is prohibited on a woven geotextile). The machine direction of the patch shall be aligned with the machine direction of the geotextile being repaired. Geotextile rolls which cannot be repaired shall be removed and replaced. Repairs shall be performed at no additional cost to the Bureau.

28:03.6 COVERING:

Geotextile shall not be covered prior to inspection and approval by the Project Manager. The geotextile shall be protected from damage during the placement of overlying materials primarily by limiting the height of drop of materials to no greater than 1-foot unless otherwise approved by the Project Manager. Any damage to the geotextile during placement of the overlying materials shall be repaired or replaced by the Contractor at his own expense.

28:03.7 MEASUREMENT AND PAYMENT:

All costs in connection with providing and installing geotextile shall be included in the unit price per square foot bid for all "Filter Fabric" items.

-- End of Section 28:00 --

32:00 EXCAVATION

32:01.1 SCOPE OF WORK:

This Section describes the requirements for stripping, excavating, and reusing excavated material for backfill. Excavation purposes are to obtain specified top and bottom elevations of structures as identified on the attached set of plans.

32:01.2 EXCAVATING TEST PITS:

Before beginning Construction Operations, locate existing subsurface structures and utilities that may be affected by or interfere with the proposed construction. Obtain utility locations. If directed by the Project Manager, excavate to obtain the utility location.

Excavate as specified in the plans and as directed by the Project Manager. Excavate test pits or portions of a test pit by hand when in close proximity to utilities or when directed. Backfill test pits with excavated material in 6-inch lifts, and compacted.

32:01.3 EXCAVATING UNCLASSIFIED MATERIAL:

Excavating. The Project Manager is solely responsible for the designation of excavated material. Unclassified excavation consists of excavation and management of material of whatever nature encountered, except for regulated material or acid producing soil.

Excavate using equipment and methods that remove material to the specified excavation limits without disturbing the material outside of the excavation limits. While excavating, protect facilities and structures from damage and disturbance. All excavation methods, including but not limited to shoring, benching, and dewatering shall be conducted in accordance with the requirements of OSHA 29 CFR 1910 and 29 CFR 1926. Ensure that material outside excavation limits is not disturbed. If any material outside the excavation limits becomes disturbed, restore the area as directed by the Project Manager. Excavate and grade to ensure proper drainage.

Notify the Project Manager if excavation to the finished grade section results in unstable subgrade or slopes. Obtain Project Manager approval before removing unstable material and backfilling the area with suitable material. Backfill with excavated material and compact.

Use excavated material on the Project, as directed by the Project Manager, or as specified in plans.

All beachfront oceanside areas within the project work limits have received hydraulically placed beach sand of a uniform nature to varying elevations. However, previously existing soil strata may exist and be encountered at the lower depths of excavation as the nature of this work is built upon a barrier island/spit of land. Soil boring logs have been provided for Contractor use.

32:00 EXCAVATION

32:01.3 EXCAVATING UNCLASSIFIED MATERIAL CON'T:

It is imperative that the contractor regulate their activities in such a manner as to separate soils of varying nature so as to replace the differing, lower elevation sand/soils, to the deepest excavated depths when placing for final grade. At no time shall any organic soils, clays, or other similar soil strata be permitted to be placed above elevation 0.00 NAVD88. Only the clean sand excavated may be placed above elevation 0.00 NAVD88 in the backfilled/regrading operations.

Wet Areas. Submit a dewatering plan including method of dewatering and controlling sediment and contaminants from entering adjacent waterbodies, wetlands, and environmentally sensitive areas. Obtain Project Manager approval for dewatering operations before beginning the work.

Excavate using equipment and methods to the specified elevation without disturbing the material below that elevation. If the methods and equipment disturb the material below the specified elevation, immediately stop operations. Resume excavation using alternate methods and equipment as approved by the Project Manager.

The Project Manager may allow the use of dikes, well points, or other means for dewatering the excavation areas if cofferdams are not elected to be utilized by the Contractor. If permits are required for this work, submit a copy of approvals to the Project Manager before proceeding with the work.

Temporary Storing. Temporarily store soil in stockpiles in well-drained areas no closer than 100 feet from the Atlantic Ocean, streams, wetlands, floodplains, other waterbodies, and as shown on the Plans. In areas not on the beach, construct stockpiles on polyethylene sheeting. Overlap joints in the underlying polyethylene sheeting a minimum of 12 inches. Contain stockpiles with haybales or silt fence placed continuously at the perimeter of the stockpiles. Construct stockpiles to heights not exceeding 15 feet and with side slopes no steeper than 2H:1V.

Protect and maintain the stockpile and embankment until reuse or disposal. Provide protection for the stockpile to control the stormwater run-off, erosion, and unauthorized contact. Where the material in the stockpile is saturated, pitch the bottom polyethylene sheeting towards a discharge basin to collect water drained from the stockpile. Manage the collected water in the same manner as that generated during dewatering operations.

Maintain the polyethylene sheeting or replace it as needed for as long as the stockpile remains. Periodically inspect stockpiles to ensure that material is not released into the surrounding environment.

When temporarily storing soil is not possible within the Project Limits, the Contractor may temporarily store soil at a site provided by the Contractor

32:00 EXCAVATION

outside the Project Limits as approved by the Project Manager.

When the stockpile is removed, restore the area to the original condition.

Pre-Excavation Plans. Submit 4 copies of the pre-excavation plan, inclusive of the dewatering plan, signed and sealed cofferdam design (if utilized), and material management plan to the Project Manager 30 days before beginning construction operations. Update and resubmit plans to identify changes in the condition or operation of the Work within 2 weeks of encountered changes. If the Contractor fails to follow the pre-excavation plans, the Project Manager will suspend the Work.

32:01.4 EXCAVATING REGULATED MATERIAL:

The Project Manager is solely responsible for the designation of excavated material. Regulated material excavation consists of excavation and management of material of whatever nature encountered that is classified as regulated or hazardous in the NJDEP Solid Waste Regulations, N.J.A.C 7:26-1 et seq. or N.J.A.C 7:26-8.

There are no known areas of regulated material on the Plans. If found, alert the Project Manager and handle regulated material according to applicable Federal, State, and local laws, rules, and regulations.

32.01.05 MEASUREMENT AND PAYMENT:

All costs associated with the excavation of materials shall be measured and paid for in accordance with Section 11:00 of the Specifications.

33:00 STANDARDS FOR CONCRETE BAG REPAIRS

33:01 PART 1 – GENERAL

33:01.1 SCOPE OF WORK:

Unless otherwise specified in Section 11:00, the work under this item shall consist of the rehabilitation of the section(s) of stone seawall designated on the Project Plans by furnishing and placing polyester fabric bags or an approved equal within the caverns and voids in the seawall and pumping a flowable mix of concrete to fill the polyester fabric bags in conformity with said caverns and voids. The Contractor shall place and fill the concrete bags under the direction of the Project Manager or his representative.

Note: The Fabric Bags supplied shall be self-sealing woven fabric that meets or exceeds the specifications herein. For bidding purposes, Texicon Concrete Bags is an acceptable product, or approved equal.

33:01.2 MEASUREMENT AND PAYMENT:

All costs associated with concrete bag repairs shall be measured and paid for in accordance with Section 11:00 of the Specifications and as further specified herein.

The quantities of concrete required to fill the bags listed under this item are estimates only, and the State reserves the right to increase or decrease the quantities of concrete to fill the bags so that the project may be constructed and paid for within the amount of funds allotted for this Project. In case of either greater or lesser quantities than those listed under the "Concrete Filled Bags" category are required to complete the work, then the Contractor shall accept payment for the actual total quantity of concrete filled bags, at the unit price bid in the Proposal, and shall make no claim for any variation in his anticipated profits, costs or charges due to the variations of the total quantities in the category (this statement shall also hold true whether within the limit of the designated section of seawall to be reconstructed or at other such locations as may have been directed by the Manager or his representative, and the Contractor shall make no extra claims for "external" placement.)

33:01.3 SUBMITTALS:

Prior to the placement of any order for pumping equipment, polyester fabric, concrete bags, or other supplies and materials to be incorporated into the work, the Contractor shall submit a list of such materials to the Manager or his representative for his review. The list submitted shall include the names and locations of prospective suppliers. The polyester fabric bags shall be Texicon Concrete Bags or an approved equal. Polyester fabric bags shall be white or gray in color.

33:00 STANDARDS FOR CONCRETE BAG REPAIRS

33:01 PART 1 – GENERAL

33:01.3 SUBMITTALS Con't:

Prior to the placement of any order for concrete grout, the Contractor shall submit the material specifications to the project manager for approval, as outlined in section 33:02.2.

All deliveries of equipment, materials, supplies and hardware delivered to the work site shall be accompanied by a certificate issued by a responsible official of the manufacturer, listing and describing the item(s), and stating that the Specifications herein have been adhered to as to quality and manufacture of said item(s).

33:01.4 OFF-LOADING FACILITIES:

The Contractor shall determine the means to receive material at the project site but will be subject to the approval of the Project Manager prior to implementation. The Contractor will be responsible for ensuring that any surrounding waterways and beaches adjacent to the site are not duly compromised or obstructed in conjunction with the receiving area. The Contractor is responsible for coordinating with local agencies and the Coast Guard if delivery of construction material by water is utilized and must submit an off-loading plan 14 days prior to the start of construction of any facility. The Contractor is responsible for compliance with all U.S. Coast Guard regulations. The Contractor is responsible for the protection of roads and utilities in the off-loading, hauling, and construction areas, and for coordinating this protection with local agencies and entities.

33:00 STANDARDS FOR CONCRETE BAG REPAIRS

33:02 PART 2 PRODUCTS

33:02.1 POLYESTER FABRIC BAGS:

The seawall is to be reconstructed using concrete filled bags having volumes greater than the voids that they are intended to fill, so that upon filling with concrete, they will expand to completely occupy the voids in the seawall. In some areas the Contractor will be required to use wire mesh or grating over the openings in the seawall to prevent the concrete bags from expanding outside the voids. The Contractor shall use the largest bags possible to fill caverns or voids. In some cases two or more bags will be required to fill very large caverns. In such cases, the multiple bags shall be of equal sizes in order to maintain the largest and heaviest masses of concrete as possible.

The Contractor shall maintain a stockpile of polyester fabric bags from Texicon or approved equal, sufficient to permit proper selection of bags to assure construction of a dense compact structure.

The Contractor shall employ suitable equipment and tools for safe handling and layout of all supplies, materials and equipment to be used in the repair and installations.

33:02.2 CONCRETE GROUT:

Concrete grout for the concrete filled bags shall be in accordance with Class B Concrete in Section 903 of the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2007 edition as amended herein.

33:00 STANDARDS FOR CONCRETE BAG REPAIRS

33:03 PART 3 EXECUTION

33:03.1 EXCAVATION (IF REQUIRED):

In preparation for using concrete filled bags the Contractor shall excavate the sand in front of the seawall, if required, in order to expose the existing caverns inside the seawall. The Contractor shall then make every effort including hand excavation and high pressure water jetting to remove as much sand as is feasibly possible from inside the seawall caverns.

The Contractor shall limit his excavation to minimize exposure of the shorefront to wave attack, and shall at no time leave an opening in the seawall structure during non-working hours. The Contractor shall be fully responsible for any damage of any kind caused either by excavation excessively in advance of completed seawall reconstruction or by inadequate protective measures employed by him during non-working hours.

The reconstructed sections of seawall shall be keyed into the existing seawall at each end in such a manner as to accomplish a continuous, integrated structure. This, and all other phases of the work under this Project, shall at all times be under the Manager. The Contractor shall insert 24" lengths of #8 rebars into adjacent bags to assure that a dense, keyed mass is created.

Contractor shall have the concrete supplier commit a minimum number of concrete trucks to be used exclusively for this project. This will assure that the proper concrete mix is delivered to the project and that the pea gravel, coarse aggregate, is not contaminated with the standard crushed rock coarse aggregate.

33:03.2 PLACEMENT:

The reconstructed sections of seawall shall be keyed into the existing seawall at each end in such a manner as to accomplish a continuous, integrated structure. This, and all other phases of the work under this Project, shall at all times be under the Manager. The Contractor shall insert 24" lengths of #8 rebars into adjacent bags to assure that a dense, keyed mass is created.

Contractor shall have the concrete supplier commit a minimum number of concrete trucks to be used exclusively for this project. This will assure that the proper concrete mix is delivered to the project and that the pea gravel, coarse aggregate, is not contaminated with the standard crushed rock coarse aggregate.

-- End of Section 33:00 --

SECTION 316219 - TIMBER PILES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes round timber piles.

1.2 UNIT PRICES

- A. The Contract Sum: Base the Contract Sum on number and dimensions of piles indicated from tip to cutoff, plus not less than 12 inches (305 mm) of overlength.
- B. Work of this Section is affected as follows:
 - 1. Additional payment for pile lengths in excess of that indicated, and credit for pile lengths less than that indicated, will be calculated at unit prices stated in the Contract, based on net addition or deduction to total pile length as determined by Architect measured to nearest 12 inches (305 mm).
 - a. Additional payment for splices required to extend pile lengths in excess of that indicated will be calculated at unit prices stated in the Contract.
 - 2. Additional payment for number of piles in excess of that indicated, and credit for number of piles less than that indicated, will be calculated at unit prices stated in the Contract.
 - 3. Unit prices include labor, materials, tools, equipment, and incidentals for furnishing, driving, cutting off, capping, and disposing of cutoffs.
 - 4. Test piles that become part of permanent foundation system will be considered as an integral part of the Work.
 - 5. No payment will be made for rejected piles, including piles driven out of tolerance, defective piles, or piles damaged during handling or driving.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation details for piles, including details of driving shoes, tips or boots, and pile butt protection.

1.4 INFORMATIONAL SUBMITTALS

- A. Round timber pile treatment data.
- B. Pile-Driving Equipment Data: Include type, make, and rated energy range; weight of striking part of hammer; weight of drive cap; and, type, size, and properties of hammer cushion.
- C. Pile-driving records.

- D. Field quality-control reports.

PART 2 - PRODUCTS

2.1 TIMBER PILES

- A. Round Timber Piles: ASTM D 25, unused, clean peeled, one piece from butt to tip; of the following species and size basis:
1. Species: Southern yellow pine.
 2. Size Basis: 8-inch (203-mm) tip and natural taper.
- B. Pressure-treat round timber piles according to AASHTO M133.:
1. Service Condition: Land and Saltwater.

2.2 PILE ACCESSORIES

- A. Driving Shoes: Fabricate from ASTM A 1011/A 1011M, hot-rolled carbon-steel strip to suit pile-tip diameter.

2.3 FABRICATION

- A. Pile Tips: Cut and shape pile tips to accept driving shoes. Fit and fasten driving shoes to pile tips according to manufacturer's written instructions.
- B. Pile Butt: Trim pile butt and cut perpendicular to longitudinal axis of pile. Chamfer and shape butt to fit tightly to driving cap of hammer.
- C. Field-Applied Wood Preservative: Treat field cuts, holes, and other penetrations according to AWPA M4.
- D. Pile-Length Markings: Mark each pile with horizontal lines at 12-inch (305-mm) intervals; label the distance from pile tip at 60-inch (1.52-m) intervals.

PART 3 - EXECUTION

3.1 DRIVING PILES

- A. General: Continuously drive piles to elevations or penetration resistance indicated. Establish and maintain axial alignment of leads and piles before and during driving.
- B. Heaved Piles: Redrive heaved piles to tip elevation at least as deep as original tip elevation with a driving resistance at least as great as original driving resistance.
- C. Driving Tolerances: Drive piles without exceeding the following tolerances, measured at pile heads:

1. Location: 4 inches (102 mm) from location indicated after initial driving, and 6 inches (152 mm) after pile driving is completed.
 2. Plumb: Maintain 1 inch (25 mm) in 4 feet (1.2 m) from vertical, or a maximum of 4 inches (102 mm), measured when pile is aboveground in leads.
 3. Batter Angle: Maximum 1 inch (25 mm) in 4 feet (1.2 m) from required angle, measured when pile is aboveground in leads.
- D. Withdraw damaged or defective piles and piles that exceed driving tolerances and install new piles within driving tolerances. Fill holes left by withdrawn piles as directed by Architect.
- E. Cutting Off: Cut off butts of driven piles square with pile axis and at elevations indicated.
- F. Pile-Driving Records: Maintain accurate driving records for each pile, compiled and attested to by a qualified professional engineer.

3.2 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified independent testing agency to perform tests and inspections.
- B. Tests and Inspections:
1. Dynamic Pile Testing: High-strain dynamic monitoring shall be performed and reported according to ASTM D 4945 during initial driving and during restriking on 3 percent of piles.

END OF SECTION 316219

SECTION 321313 - CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Walks.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For each exposed product and for each color and texture specified.
- C. Other Action Submittals:
1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.3 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. ACI Publications: Comply with ACI 301 (ACI 301M) unless otherwise indicated.

PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

- A. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- B. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from as-drawn steel wire into flat sheets.
- C. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.
- D. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420); deformed.
- E. Plain-Steel Wire: ASTM A 82/A 82M, as drawn.
- F. Deformed-Steel Wire: ASTM A 496/A 496M.

- G. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified.

2.2 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of same type, brand, and source throughout Project:
 - 1. Portland Cement: ASTM C 150, gray portland cement Type II
- B. Normal-Weight Aggregates: ASTM C 33, uniformly graded. Provide aggregates from a single source.
- C. Water: Potable and complying with ASTM C 94/C 94M.
- D. Air-Entraining Admixture: ASTM C 260.
- E. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

2.3 CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry or cotton mats.
- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

2.4 RELATED MATERIALS

- A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork] in preformed strips.
- B. Slip-Resistive Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery aggregate containing not less than 50 percent aluminum oxide and not less than 20 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.

2.5 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301 (ACI 301M), with the following properties:
 - 1. Compressive Strength (28 Days): 4000 psi (27.6 MPa).
 - 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
 - 3. Slump Limit: 4 inches (100 mm), plus or minus 1 inch (25 mm).
 - 4. Air Content: 5-1/2 percent plus or minus 1.5 percent.
- B. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.

2.6 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.
- B. Remove loose material from compacted subbase surface immediately before placing concrete.

3.2 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.3 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.4 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.

- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness[, to match jointing of existing adjacent concrete paving]:
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 3/8-inch (10-mm) radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.5 CONCRETE PLACEMENT

- A. Moisten subbase to provide a uniform dampened condition at time concrete is placed.
- B. Comply with ACI 301 (ACI 301M) requirements for measuring, mixing, transporting, placing, and consolidating concrete.
- C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- D. Screed paving surface with a straightedge and strike off.
- E. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.6 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 - 1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
 - 2. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.
 - 3. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch (1.6 to 3 mm) deep with a stiff-bristled broom, perpendicular to line of traffic.
- C. Slip-Resistive Aggregate Finish: Before final floating, spread slip-resistive aggregate finish on paving surface according to manufacturer's written instructions.

1. Cure concrete with curing compound recommended by slip-resistive aggregate manufacturer. Apply curing compound immediately after final finishing.
2. After curing, lightly work surface with a steel wire brush or abrasive stone and water to expose nonslip aggregate.

3.7 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by [moisture curing] [moisture-retaining-cover curing] [curing compound] [or] [a combination of these].

3.8 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as follows:
 1. Elevation: 3/4 inch (19 mm).
 2. Thickness: Plus 3/8 inch (10 mm), minus 1/4 inch (6 mm).
 3. Surface: Gap below 10-foot- (3-m-) long, unlevelled straightedge not to exceed 1/2 inch (13 mm).
 4. Joint Spacing: 3 inches (75 mm).
 5. Contraction Joint Depth: Plus 1/4 inch (6 mm), no minus.
 6. Joint Width: Plus 1/8 inch (3 mm), no minus.

3.9 REPAIRS AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
- B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 321313

SECTION 033053 - MISCELLANEOUS CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes cast-in-place concrete, including reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Other Action Submittal:
 - 1. Design Mixtures: For each concrete mixture.

1.4 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. Comply with the following sections of ACI 301 (ACI 301M), unless modified by requirements in the Contract Documents:
 - 1. "General Requirements."
 - 2. "Formwork and Formwork Accessories."
 - 3. "Reinforcement and Reinforcement Supports."
 - 4. "Concrete Mixtures."
 - 5. "Handling, Placing, and Constructing."
 - 6. "Lightweight Concrete."
- C. Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

PART 2 - PRODUCTS

2.1 FORMWORK

- A. Furnish formwork and formwork accessories according to ACI 301 (ACI 301M).

2.2 STEEL REINFORCEMENT

- A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- B. Reinforcing Bars: ASTM A 615, Grade 60 , deformed.
- C. Plain-Steel Wire: ASTM A 82/A 82M, as drawn.
- D. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from as-drawn steel wire into flat sheets.
- E. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.
- F. Refer to the Structural Engineers drawings for additional requirements.

2.3 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source throughout Project:
 - 1. Portland Cement: ASTM C 150,
 - 2. Blended Hydraulic Cement: ASTM C 595,
- B. Normal-Weight Aggregate: ASTM C 33, graded, 1-1/2-inch nominal maximum aggregate size.
- C. Lightweight Aggregate: ASTM C 330, 1-inch nominal maximum aggregate size.
- D. Water: ASTM C 94/C 94M.
- E. Refer to the Structural Engineers drawings for additional requirements.

2.4 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 - 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - 4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 - 5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 - 6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

2.5 RELATED MATERIALS

- A. Vapor Retarder: Plastic sheet, ASTM E 1745, Class A or B.

- B. Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils (0.25 mm) thick; or plastic sheet, ASTM E 1745, Class C.
- C. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

2.6 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth or cotton mats.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
- F. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.7 CONCRETE MIXTURES

- A. Refer to the structural Engineers drawings for requirements for concrete mixtures.

2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116, and furnish batch ticket information.
 - 1. When air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
 - 1. For mixer capacity of 1 cu. yd. (0.76 cu. m) or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
 - 2. For mixer capacity larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
 - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, construct, erect, brace, and maintain formwork according to ACI 301 (ACI 301M).

3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.3 VAPOR RETARDERS

- A. Install, protect, and repair vapor retarders according to ASTM E 1643; place sheets in position with longest dimension parallel with direction of pour.
 - 1. Lap joints 6 inches (150 mm) and seal with manufacturer's recommended adhesive or joint tape.

3.4 STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.5 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Locate and install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness, as follows:
 - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with groover tool to a radius of 1/8 inch (3.2 mm). Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.
 - 2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

- D. Isolation Joints: Install joint-filler strips at junctions with slabs-on-grade and vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
 - 1. Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.

3.6 CONCRETE PLACEMENT

- A. Comply with ACI 301 (ACI 301M) for placing concrete.
- B. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301 (ACI 301M).
- C. Do not add water to concrete during delivery, at Project site, or during placement.
- D. Consolidate concrete with mechanical vibrating equipment.

3.7 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defective areas repaired and patched. Remove fins and other projections exceeding 1/2 inch (13 mm).
 - 1. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections exceeding 1/8 inch (3 mm).
 - 1. Apply to concrete surfaces exposed to public view.
- C. Rubbed Finish: Apply the following rubbed finish, defined in ACI 301 (ACI 301M), to smooth-formed finished as-cast concrete where indicated:
 - 1. Smooth-rubbed finish.
 - 2. Grout-cleaned finish.
 - 3. Cork-floated finish.
- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.8 FINISHING UNFORMED SURFACES

- A. General: Comply with ACI 302.1R for screeding, restraughtening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface.

1. Do not further disturb surfaces before starting finishing operations.
- C. Scratch Finish: Apply scratch finish to surfaces indicated and surfaces to receive concrete floor topping or mortar setting beds for ceramic or quarry tile, portland cement terrazzo, and other bonded cementitious floor finishes, unless otherwise indicated.
- D. Float Finish: Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, fluid-applied or direct-to-deck-applied membrane roofing, or sand-bed terrazzo.
- E. Trowel Finish: Apply a hard trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system.
- F. Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling, to surfaces indicated and to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set methods. Immediately after second troweling, and when concrete is still plastic, slightly scarify surface with a fine broom.
- G. Nonslip Broom Finish: Apply a nonslip broom finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

3.9 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with ACI 301 (ACI 301M) for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- D. Curing Methods: Cure formed and unformed concrete for at least seven days by one or a combination of the following methods:
 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.
 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Tests: Perform according to ACI 301 (ACI 301M).
 1. Testing Frequency: One composite sample shall be obtained for each day's pour of each concrete mix exceeding 5 cu. yd. (4 cu. m) but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
 2. Testing Frequency: One composite sample shall be obtained for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mix placed each day.

3.11 REPAIRS

- A. Remove and replace concrete that does not comply with requirements in this Section.

END OF SECTION 033053

SECTION 055213 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Stainless-steel pipe and tube railings.

1.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design railings, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
1. Handrails and Top Rails of Guards:
 - a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
 - b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
- C. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1.3 ACTION SUBMITTALS

- A. Product Data: For the following:
1. Manufacturer's product lines of mechanically connected railings.
 2. Railing brackets.
 3. Grout, anchoring cement, and paint products.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each type of exposed finish required.
- D. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- a. Stainless-Steel Pipe and Tube Railings:
 - b. Blum, Julius & Co., Inc.
 - c. Paragon Aquatics; Division of Pentair, Inc.
 - d. Pisor Industries, Inc.
 - e. Stainless Fabricators, Inc.
 - f. Sterling Dula Architectural Products, Inc.; Div. of Kane Manufacturing.
 - g. Tri Tech, Inc.
 - h. Tubular Specialties Manufacturing, Inc.
 - i. Tuttle Railing Systems; Div. of Tuttle Aluminum & Bronze, Inc.
 - j. Wagner, R & B, Inc.; a division of the Wagner Companies.
 - k. <Insert manufacturer's name>.

2.2 METALS, GENERAL

- A. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

2.3 STAINLESS STEEL

- A. Tubing: ASTM A 554, Grade MT 316L
- B. Pipe: ASTM A 312/A 312M, Grade TP 316L.
- C. Plate and Sheet: ASTM A 240/A 240M or ASTM A 666, Type 316L

2.4 MISCELLANEOUS MATERIALS

- A. Fasteners: Provide the following:
- 1. Stainless-Steel Railings: Type 316 stainless-steel fasteners.
- B. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
- C. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- D. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

- F. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.5 FABRICATION

- A. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- B. Form work true to line and level with accurate angles and surfaces.
- C. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove flux immediately.
 - 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- D. Form changes in direction by bending.
- E. Bend members in jigs to produce uniform curvature without buckling or otherwise deforming exposed surfaces.
- F. Close exposed ends of railing members with prefabricated end fittings.
- G. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

2.6 STAINLESS-STEEL FINISHES

- A. 180-Grit Polished Finish: Oil-ground, uniform, directionally textured finish.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 - 1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 - 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
 - 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (5 mm in 3 m).

- B. Anchor posts in concrete by inserting into formed or core-drilled holes and grouting annular space.
- C. Anchor handrails to wood posts with circular brackets (see detail on dwg A.203).
- D. Anchor railing ends at floors with round flanges anchored to floor construction.

3.2 ADJUSTING AND CLEANING

- A. Immediately after erection, clean all rails and fittings including sleeve and screwed connections, and leave spotless.

END OF SECTION 055213

SECTION 061500 - WOOD DECKING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-sawn **floor** decking.

B. Related Sections:

1. Section 061063 "Exterior Rough Carpentry" for wood decking for elevated decks.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

1.3 QUALITY ASSURANCE

- A. Standard for Solid-Sawn Wood Decking: Comply with AITC 112.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Schedule delivery of wood decking to avoid extended on-site storage and to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 WOOD DECKING, GENERAL

- A. General: Comply with DOC PS 20 and with applicable grading rules of inspection agencies certified by ALSC's Board of Review.
- B. Certified Wood: Wood decking shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."
- C. Moisture Content: Provide wood decking with **15** percent maximum moisture content at time of dressing.

2.2 SOLID-SAWN WOOD DECKING

- A. Decking Species: southern pine.

- B. Decking Nominal Size: **2x6**.
- C. Decking Grade: See drawing A.202..
- D. Grade Stamps: Factory mark each item with grade stamp of grading agency. Apply grade stamp to surfaces that will not be exposed to view.
- E. Face Surface and Edge Pattern: Smooth face, standard edge.

2.3 ACCESSORY MATERIALS

- A. Fastener Material: **Stainless** steel.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install solid-sawn wood decking to comply with referenced decking standard.
 - 1. Locate end joints for **two-span continuous lay-up**.
- B. Provide temporary waterproof covering as the Work progresses to protect roof decking until roofing is applied.

END OF SECTION 061500

SECTION 061063 - EXTERIOR ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Elevated decks including wood decking stairs railings and support framing.

1.2 ACTION SUBMITTALS

A. Product Data: For preservative-treated wood products and metal framing anchors.

B. Material Certificates:

1. For lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by ALSC's Board of Review.
2. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained.

1.3 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For the following, from organizations listed on dwg. A.202:

1. Preservative-treated wood products.
2. Decking fasteners.

PART 2 - PRODUCTS

2.1 LUMBER, GENERAL

A. Lumber: Comply with DOC PS 20 and with applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by ALSC's Board of Review. Provide lumber graded by an agency certified by ALSC's Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each item with grade stamp of grading agency.
2. For items that are exposed to view in the completed Work, mark grade stamp on end or back of each piece.
3. Provide dressed lumber, S4S, unless otherwise indicated.

B. Certified Wood: Wood products shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

2.2 DIMENSION LUMBER

- A. Maximum Moisture Content: 19 percent.
- B. Deck and Stair and Ramp Framing: No. 2 grade of the following specie:
 - 1. Southern pine; SPIB.

2.3 BOARDS

- A. Maximum Moisture Content: 15 percent.
- B. Board Decking and Stair Treads: 1-1/4-inch- (32-mm-) thick radius-edged decking of the following specie and grade:
 - 1. Southern pine, #2 SPIB.
- C. Railing Boards:
 - 1. Southern pine, B & B finish; SPIB.

2.4 TIMBER

- A. Maximum Moisture Content: 19 percent.
- B. Dressing: Provide dressed timber (S4S) unless otherwise indicated.
- C. Timber Posts: Southern pine; No. 2, SPIB.

2.5 PRESERVATIVE TREATMENT

- A. Pressure treat boards and dimension lumber with waterborne preservative – see dwg. A.202.
- B. Use process that includes water-repellent treatment.
- C. Mark treated wood with treatment quality mark of an inspection agency approved by ALSC's Board of Review.
- D. Application: Treat all exterior rough carpentry unless otherwise indicated..

2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 1-1/2 inches (38 mm) into wood substrate.
 - 1. For pressure-preservative-treated wood, use stainless-steel fasteners.
- B. Postinstalled Anchors: Stainless-steel, chemical or torque-controlled expansion anchors with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry assemblies and equal to four times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Stainless-steel bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4).
2. The plates, angles, nuts, bolts, washers and all other hardware for the connection of the piles to pile header beams (girders) and for the joists to the header beams below the plank deck shall be of hot dipped galvanized steel.

2.7 METAL FRAMING ANCHORS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Cleveland Steel Specialty Co.
 2. Harlen Metal Products, Inc.
 3. KC Metals Products, Inc.
 4. Simpson Strong-Tie Co., Inc.
 5. Southeastern Metals Manufacturing Co., Inc.
 6. USP Structural Connectors.
 7. <Insert manufacturer's name>.
- B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated on Drawings. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Furnish fabricate and erect all timbers and associated materials, including timber joists, timber posts, pickets, face beams, header beams and decking all as shown on the drawings. Set exterior rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit exterior rough carpentry to other construction; scribe and cope as needed for accurate fit. Include all necessary galvanized timber connecting hardware such as nails, screws, lag bolts, nuts and washers, tie rods, plates, hangers, angles etc.
- B. Pilot holes shall be drilled prior to installing screws and bolts in the timber members.
- C. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction" unless otherwise indicated.
- D. Install wood decking and stair treads with crown up (bark side down).
- E. Install metal framing anchors to comply with manufacturer's written instructions.
- F. Do not splice structural members between supports unless otherwise indicated.
- G. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

- H. Securely attach exterior rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. NES NER-272 for power-driven fasteners.
 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 3. Table 23-II-B-1, "Nailing Schedule," in ICBO's Uniform Building Code.
 4. Table 2305.2, "Fastening Schedule," in BOCA's BOCA National Building Code.
 5. Table 2306.1, "Fastening Schedule," in SBCCI's Standard Building Code.
 6. Table R602.3(1), "Fastener Schedule for Structural Members" and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
- I. Provide stair framing with no more than 3/16-inch (4.7-mm) variation between adjacent treads and risers and no more than 3/8-inch (9.5-mm) variation between largest and smallest treads and risers within each flight.
- J. Treads and Risers: Secure by gluing and screwing to carriages. Countersink fastener heads, fill flush, and sand filler. Extend treads over carriages and finish with bullnose edge.
- K. Railings: Fasten freestanding railings to newel posts with countersunk-head wood screws or rail bolts and glue.
- L. After erection touch up galvanized surfaces with zinc primer.

END OF SECTION 061063

BORING LOGS FOR THIS CONTRACT ARE NOT REPRINTED HERE DUE TO
SIZE



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Land Use Regulation

Mail Code 501-02A

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Trenton, New Jersey 08625-0420

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NOV 02 2015

Rob Lore
Environmental and Historic Advisor
FEMA - 4086 - DR-NJ
260 Industrial Way West
Eatontown, NJ 07724

Re: Federal Consistency Determination for the Seawall Repair in the Borough of Sea Bright and Monmouth Beach
DLUR File No. 1300-15-0005.1. CDT150001

Dear Mr. Dixon and Mr. Lore:

The New Jersey Department of Environmental Protection, Division of Land Use Regulation, acting under Section 307 of the Federal Coastal Management Act (P.L. 92-583) as amended, finds FEMA and the NJDEP Bureau of Coastal Engineering's (BCE) proposed seawall repair and construction in the Borough of Sea Bright and Monmouth Beach, Monmouth County, consistent with the approved New Jersey Coastal Management Program.

The BCE office is proposing to repair areas of the damaged seawall as needed and install approximately 1,077 linear feet of new seawall in three areas, in order to close up gaps between the existing seawall.

The seawall repairs include reconstruction of sections of the existing seawall within the existing footprint by resetting the stone, adding larger cap stone, increasing the elevation to +18.0 ft. NAVD 88 and will include a stone toe protection to a maximum of -14.8 ft. NAVD 88, with a waterward slope of 15:1. In addition, several areas will be reinforced with concrete bags and grout filler as needed.

The new seawall sections will be constructed to a maximum elevation of +18.0 ft. NAVD 88 and will include a stone toe protection to a maximum of -14.8 ft. NAVD 88, with a waterward slope of 15:1. The first area of 424 linear feet of new seawall is located in front the Borough's proposed comfort station and public parking area in the Borough of Sea Bright. This section also includes a vehicle crossover and a public access walkover. The second area of 20 linear feet of new seawall is located within the Tradewinds residential development, in the Borough of Sea Bright. An existing wooden bulkhead will be removed at this location, and a new core stone and cap stone will be placed in order to tie into the adjacent seawall. The third location is

approximately 633 linear feet in the Borough of Monmouth Beach. The new seawall will be constructed in a straight line, beginning at the northern end of the municipal parking lot, extending in front of the bathing pavilion, tying into the existing seawall to the south. This section also includes a vehicle crossover and reconstruction of existing public access ramps.

This work is shown on 17 sheets entitled:

“STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF ENGINEERING & CONSTRUCTION BUREAU OF COASTAL ENGINEERING SEA BRIGHT & MONMOUTH BEACH SEAWALL REPAIR & CONSTRUCTION BOROUGH OF SEA BRIGHT & BOROUGH OF MONMOUTH BEACH COUNTY OF MONMOUTH”, all sheets dated August 2015, unrevised and prepared by T & M Associates.

To ensure consistency with the New Jersey Coastal Management Program, the following conditions must be met:

1. All staging areas must be returned to the pre-existing condition within 60 days of completion of the project.
2. This determination only authorizes work on parcels for which the property owner has authorized this work on their properties. Work on any other properties will require additional permits and approval from the appropriate property owners.
3. The permittee(s) shall adhere to the Sea Bright Borough Federal Beach Management Plan for the Protection of Federally and State-Listed Species (June 2006) and the Borough of Monmouth Beach Federal Beach Management Plan for the Protection of Federally and State-Listed Species (April 2008).
4. The permittee shall coordinate points of beach access and staging areas with the US Fish & Wildlife Service (USFWS), New Jersey Field Office (“USFWS-NJFO”); ensuring the areas are located outside of areas known habitat for species of concern.
5. In order to protect habitat for State and Federally listed beach nesting birds, the permittee:
 - a. Shall adhere to a seasonal restriction on all work, for all work locations, as well as any staging of work areas, from March 15th through August 31st of each calendar year; and,
 - b. Shall notify the NJ Division of Fish & Wildlife Endangered & Nongame Species Program (“ENSP”) as work in each of the project locations is concluding in order for ENSP staff to inspect and assess the work locations for unexpected habitat changes or other problems that need correction. The permittee is responsible for assuming all liability for any corrective work necessary to repair injury to beach-nesting bird habitat.
6. For work proposed to take place at any point during the Seabeach Amaranth growing season, which runs from May 15th through November 30th, the permittee must implement appropriate survey, monitoring and coordination efforts with the USFWS-NJFO:

- a. A qualified biologist shall conduct a survey of the project area a maximum of one week prior to the initiation of construction, but no earlier than May 1st, in order to document the presence or absence of seabeach amaranth. The survey shall be conducted by walking slowly and carefully in a zig-zag fashion from the high-water line (seaward limit of vegetation) to the dune, seawall, boardwalk, or other landward limit of the beach, ensuring complete survey coverage of the area of disturbance. (Note: Seedlings may be small and inconspicuous. The biologist may refer to the USFWS-NJFO collection of Amaranth photos found at "<http://www.fws.gov/northeast/njfieldoffice/endangered/amaranth.html#photos>".)
 - b. In the event that Seabeach Amaranth is observed, information including locations, number and size of plants shall be recorded and promptly provided to the USFWS-NJFO, Division of Land Use Regulation Endangered & Threatened Species Unit and to the New Jersey Natural Heritage Program.
 - c. In order to protect and avoid disturbance to all Seabeach Amaranth locations, symbolic fencing (i.e., post and string only; NEVER snow fence), marked with flagging and signs, shall be installed around each occurrence; providing a 10-foot buffer around all sides of the plant(s).
 - d. All construction activities shall avoid any delineated locations of Seabeach Amaranth and no materials or equipment shall be stockpiled or stored within 100 meters of known seabeach amaranth sites. All work crews shall be instructed to avoid fenced areas (i.e., do not enter on foot or via motor vehicle; do not stage or store materials or equipment in or near fencing; locate access routes away from fenced area; do not grade sand in or near fencing; etc.).
 - e. Symbolic fencing shall be removed upon completion of work.
 - f. For project initiated prior to May 1st but continuing into the Seabeach Amaranth growing season, the survey shall be conducted in areas not yet constructed as of May 1st.
7. Consistent with Assembly Bill, No. 2804, P.L. 2007, CHAPTER 113 the use of creosote treated material (or other descriptive term from the law) in the construction of the authorized structure(s) is prohibited.
 8. This permit does not obviate you from obtaining any other necessary federal, state or local approvals.
 9. This permit does not authorize dredging activities.
 10. All excavated material shall be disposed of in a lawful manner. For example, it should be placed outside of any flood hazard area, riparian zone, regulated water, freshwater wetland and adjacent transition area, and in such a way as to not interfere with the positive drainage of the receiving area.
 11. The seawall must be constructed to withstand displacement, overturning, and failure due to undermining and/or pressure from soil, water and frost.

12. Public access to the waterfront and along the beach must be maintained during and after project construction.

This Federal Consistency is authorized pursuant to all parties following the guidelines set forth, and agreed upon, for the proposed work.

Pursuant to 15 CFR 930.44, the Division reserves the right to object and request remedial action if this proposal is conducted in a manner, or is having an effect on, the coastal zone that is substantially different than originally proposed.

Thank you for your attention to and cooperation with New Jersey's Coastal Zone Management Program. If you have any questions with regard to this determination, please do not hesitate to contact Kara Turner, at the above address or at 609-633-2289.

Sincerely,



Colleen Keller
Manager
Bureau of Coastal Regulation

Cc: Elizabeth Semple, Division of Coastal and Land Use Planning



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

MAR 23 2016

William Dixon, Manager
NJDEP Bureau of Coastal Engineering
1510 Hooper Avenue, Suite 140
Toms River, NJ 08753

Rob Lore
Environmental and Historic Advisor
FEMA - 4086 - DR-NJ
260 Industrial Way West
Eatontown, NJ 07724

Re: Federal Consistency Determination for Accessways in the Borough of Monmouth Beach
DLUR File No. 1333-04-0001.3 CDT160001
X-Reference: DLUR File No. 1300-15-0005.1 CDT 150001

Dear Mr. Dixon and Mr. Lore:

The New Jersey Department of Environmental Protection, Division of Land Use Regulation, acting under Section 307 of the Federal Coastal Management Act (P.L. 92-583) as amended, finds the Federal Emergency Management Agency (FEMA) and the NJDEP Bureau of Coastal Engineering's (BCE) proposed revised configuration of a vehicular accessway and stairs in the Borough of Monmouth Beach, Monmouth County, consistent with the approved New Jersey Coastal Management Program.

The original Federal Consistency, referenced above, authorized repairs to damaged sections of the seawall, the installation of approximately 1,077 linear feet of new seawall in three areas, the construction of vehicle crossovers and the reconstruction of existing public access ramps, in the Borough of Sea Bright and the Borough of Monmouth Beach.

This Federal Consistency authorizes a revised configuration of the vehicular accessway and the construction of a new pedestrian stairway from the top of the seawall to the beach, at the Monmouth Beach Bathing Pavilion.

This work is shown on 2 sheets, sheets 12 of 18 and 18 of 18, both entitled:

"STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF ENGINEERING & CONSTRUCTION BUREAU OF COASTAL ENGINEERING SEAWALL REPAIR AND CONSTRUCTION BOROUGH OF SEA BRIGHT & BOROUGH OF MONMOUTH BEACH COUNTY OF MONMOUTH", both sheets dated August 2015, last revised January 4, 2016 and prepared by T & M Associates.

To ensure consistency with the New Jersey Coastal Management Program, the following conditions must be met:

1. All staging areas must be returned to the pre-existing condition within 60 days of completion of the project.
2. This determination only authorizes work on parcels for which the property owner has authorized this work on their properties. Work on any other properties will require additional permits and approval from the appropriate property owners.
3. The permittee(s) shall adhere to the Sea Bright Borough Federal Beach Management Plan for the Protection of Federally and State-Listed Species (June 2006) and the Borough of Monmouth Beach Federal Beach Management Plan for the Protection of Federally and State-Listed Species (April 2008).
4. The permittee shall coordinate points of beach access and staging areas with the US Fish & Wildlife Service (USFWS), New Jersey Field Office (USFWS-NJFO), ensuring the areas are located outside of areas that are known habitat for species of concern.
5. In order to protect habitat for State and Federally listed beach nesting birds, the permittee:
 - a. Shall adhere to a seasonal restriction on all work, for all work locations, as well as any staging of work areas, from March 15th through August 31st of each calendar year; and,
 - b. Shall notify the NJ Division of Fish & Wildlife Endangered & Nongame Species Program (ENSP) as work in each of the project locations is concluding in order for ENSP staff to inspect and assess the work locations for unexpected habitat changes or other problems that need correction. The permittee is responsible for assuming all liability for any corrective work necessary to repair injury to beach-nesting bird habitat.
6. For work proposed to take place at any point during the Seabeach Amaranth growing season, which runs from May 15th through November 30th, the permittee must implement appropriate survey, monitoring and coordination efforts with the USFWS-NJFO:
 - a. A qualified biologist shall conduct a survey of the project area a maximum of one week prior to the initiation of construction, but no earlier than May 1st, in order to document the presence or absence of seabeach amaranth. The survey shall be conducted by walking slowly and carefully in a zig-zag fashion from the high-water line (seaward limit of vegetation) to the dune, seawall, boardwalk, or other landward limit of the beach, ensuring complete survey coverage of the area of disturbance. Note: Seedlings may be small and inconspicuous. The biologist may refer to the USFWS-NJFO collection of Amaranth photos found at <http://www.fws.gov/northeast/njfieldoffice/endangered/amaranth.html#photos>.
 - b. In the event that Seabeach Amaranth is observed, information including locations, number and size of plants shall be recorded and promptly provided to the USFWS-NJFO, Division of Land Use Regulation Endangered & Threatened Species Unit and to the New Jersey Natural Heritage Program.
 - c. In order to protect and avoid disturbance to all Seabeach Amaranth locations, symbolic fencing (i.e., post and string only; NEVER snow fence), marked with flagging and signs, shall be installed around each occurrence; providing a 10-foot buffer around all sides of the plant(s).

- d. All construction activities shall avoid any delineated locations of Seabeach Amaranth and no materials or equipment shall be stockpiled or stored within 100 meters of known seabeach amaranth sites. All work crews shall be instructed to avoid fenced areas (i.e., do not enter on foot or via motor vehicle; do not stage or store materials or equipment in or near fencing; locate access routes away from fenced area; do not grade sand in or near fencing; etc.).
 - e. Symbolic fencing shall be removed upon completion of work.
 - f. For portions of the project initiated prior to May 1st but continuing into the Seabeach Amaranth growing season, the survey shall be conducted in areas not yet constructed prior to May 1st.
7. Consistent with Assembly Bill, No. 2804, P.L. 2007, CHAPTER 113, the use of creosote treated material (or other descriptive term from the law) in the construction of the authorized structure(s) is prohibited.
 8. This permit does not obviate you from obtaining any other necessary federal, state or local approvals.
 9. This permit does not authorize dredging activities.
 10. All excavated material shall be disposed of in a lawful manner. For example, it should be placed outside of any flood hazard area, riparian zone, regulated water, freshwater wetland and adjacent transition area, and in such a way as to not interfere with the positive drainage of the receiving area.
 11. Public access to the waterfront and along the beach must be maintained during and after project construction.
 12. This Federal Consistency Determination does not supersede conditions of the original Federal Consistency Determination. All conditions of the original Determination still need to be addressed.

This Federal Consistency is authorized pursuant to all parties following the guidelines set forth, and agreed upon, for the proposed work.

Pursuant to 15 CFR 930.44, the Division reserves the right to object and request remedial action if this proposal is conducted in a manner, or is having an effect on, the coastal zone that is substantially different than originally proposed.

Thank you for your attention to and cooperation with New Jersey's Coastal Zone Management Program. If you have any questions with regard to this determination, please do not hesitate to contact Kara Turner, at the above address or at 609-633-2289.

Sincerely,



Colleen Keller
Manager

Bureau of Coastal Regulation

Cc: Elizabeth Semple, Division of Coastal and Land Use Planning

SECTION #2: SEA BRIGHT; ANCHORAGE SEAWALL REPAIR (IF AND WHERE DIRECTED):

ITEM NO. 5.1 – EXCAVATION

The completion of excavation work as specified in Section 11:05, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 5.2 – REHANDLED ARMOR CAP STONE

Rehandling of Armor Cap Stone, as specified in Section 11:05, complete and in place and as shown on the project plans, and distributed as follows:

"A" QUANTITY: 3,785 TONS @ a unit price of \$ _____ per TON,
or \$ _____

"B" QUANTITY: 570 TONS @ a unit price of \$ _____ per TON,
or \$ _____

ITEM NO. 5.3 – GROIN SEALING

(A) Groin Sealing Removal: The completion of Groin Sealing Removal work, as specified in Section 11:05, complete and in place and as shown on the project plans, for the lump sum of \$ _____

(B) New Groin Sealing: Placement of 50 cubic yards (CY) of Groin Sealing, as specified in Section 11:05, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

ITEM NO. 9.8 – PEDESTRIAN CROSSOVER RECONSTRUCTION:

The completion of pedestrian crossover reconstruction work as specified in Section 11:09, complete and in place and as shown on the project plans, for the lump sum of \$ _____

SECTION #7: SEA BRIGHT; DONOVAN’S TO VILLAGE RD SEAWALL REPAIR (IF AND WHERE DIRECTED):

ITEM NO. 10.1 – GROIN SEALING

(A) Groin Sealing Removal: The completion of Groin Sealing Removal work, as specified in Section 11:10, complete and in place and as shown on the project plans, for the lump sum of \$ _____

(B) New Groin Sealing: Placement of 165 cubic yards (CY) of Groin Sealing, as specified in Section 11:10, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

ITEM NO. 10.2 – CONCRETE BAG REPAIRS

Placement of 300 cubic yards (CY) of Concrete Bag Repairs (if and where directed), as specified in Section 11:10, complete and in place and as shown on the project plans, at a unit price of _____ per CY, or \$ _____

SECTION #8: SEA BRIGHT; TRADEWINDS GAP SEAWALL CONSTRUCTION:

ITEM NO. 11.1 – EXCAVATION

The completion of excavation work as specified in Section 11:11, complete and in place and as shown on the project plans, for the lump sum of \$ _____

ITEM NO. 13.2 – REHANDLED ARMOR CAP STONE

Rehandling of Armor Cap Stone,
as specified in Section 11:13, complete
and in place and as shown on the project plans,
and distributed as follows:

"A" QUANTITY: 3,105 TONS @ a unit price of \$_____ per TON,
or \$_____

"B" QUANTITY: 550 TONS @ a unit price of \$_____ per TON,
or \$_____

ITEM NO. 13.3 – GROIN SEALING

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:13, complete and in place
and as shown on the project plans,
for the lump sum of..... \$_____

(B) New Groin Sealing: Placement of
20 cubic yards (CY) of Groin Sealing,
as specified in Section 11:13, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$_____

**SECTION #11: MONMOUTH BEACH; SOUTH OF BATHING PAVILION -
SEAWALL REHAB (IF AND WHERE DIRECTED):**

ITEM NO. 14.1 – GROIN SEALING

(A) Groin Sealing Removal: The completion
of Groin Sealing Removal work, as specified
in Section 11:14, complete and in place
and as shown on the project plans,
for the lump sum of..... \$_____

(B) New Groin Sealing: Placement of
135 cubic yards (CY) of Groin Sealing,
as specified in Section 11:14, complete
and in place and as shown on the project plans,
at a unit price of _____ per CY, or \$_____

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

Clarification to Section 1:06 – Determination of Lowest Bid and Contract Award,
Sub-Section B. – Stone Setting Experience and Qualifications, i. – Contractor:

The intent of the Stone Setting Experience and Qualifications is to assure the State of New Jersey that the selected Contractor has the necessary skill set/s to coordinate phasing of work, management of stone importation, management of stone stockpiles, installation of stone layers, keying of capstone, and all other aspects to be considered in this type of work. The Contractor may elect to provide proof of experience through a Joint Venture or other means to partner with another firm with the proper experience as a means to ensure said qualifications. The Contractor shall submit the qualification of both firms of the Joint Venture at time of bid for consideration of award.

1. *Does the alternate pile support detail shown on plan sheet SD-2 also apply for the Ocean Front Pavilion Timber Piles?*

A. The alternate pile support system detail shown on page SD-2 does NOT apply to the "Ocean Front Pavilion Timber Piles".

2. *Under 11:16 section 6.a for the Seabeach Amaranth, it states that a qualified biologist shall conduct a survey of the project area a max of 1 week before initiation of construction but no earlier than May 1st. Under the letter from the NJDEP dated March 23, 2016 item 6 states that the **PERMITEE** must implement the appropriate survey and monitoring for Seabeach Amaranth. Please clarify if the Contractor or the NJDEP is providing the marine biologist.*

A. The Contractor shall provide the qualified biologist per USFWS recommendations.

3. *Please confirm that the Contractor is to provide the qualified person to conduct the survey for the piping plover.*

A. The Contractor shall provide the qualified person to conduct the survey for piping plover and all other beach nesting birds per USFWS recommendations.

4. *The use of wood with CCA for use on public decks and handrails under APWA Standard C18 is prohibited. Under that standard, CCA is allowable for piles and framing, but not the timber in direct contact with people. Please clarify if another wood preservative is to be used for timber decking and handrails only, in lieu of CCA.*

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

A. Refer to Sheets 29 (SN-1) and 60 (SN-2), notes 4-6 under the "TIMBER" heading, specifically #6 which states "...The Contractor shall submit certifications that treatment used is as specified and approved for the use intended."

5. *The Concrete Splash Pad Detail on Sheet 73 of 89 is missing the information regarding the type of rebar or the type of wire mesh to be used. Please provide this information.*

A. For the concrete splash pad the dowel bars are 1" diameter, 18" long. The welded wire fabric should be WWF type 6x6 - w4.0xw4.0.

6. *The drawings and specifications don't clearly address the following issue. There will be excess sand, roughly equivalent to the volume of new stone being placed below grade. We assume the DEP and towns would want that excess sand to stay on the beach for future protection, but it does not clearly state that. Please clarify that the existing excess sand/soil created from the excavation bid items shall remain onsite in the general backfill locations it has been removed from, and it should be graded to generally match the existing beach grades as best as possible? Or should it be stockpiled at a specific location onsite?*

A. The existing excess sand/soil created from the excavation bid items shall remain onsite in the general backfill locations it has been removed from and graded to generally match the existing beach grades to the best of the Contractor's ability. The displaced material arising from the addition of new stone shall be tapered into the existing beach profile with any organic soils, clays, or similar soil strata placed below elevation 0.00 NAVD88, as outlined in Section 32:00 "Excavation".

7. *Bid Item #10.1 (A) is for groin sealing removal Section #7. Typical Section F on drawing #5 does not call for any sealing removal. And the drawings do not give any approximate limits or quantity of groin sealing removal, which is a Lump Sum item. Since this entire Section #7 is an If & Where section, we have no way to correctly price up a Lump Sum item. Please provide more details on this item so we can price it correctly.*

A. The Contractor shall only remove loose/damaged groin sealing as necessary to facilitate installation of new groin sealing if/where directed by the Project Manager. For estimating purposes, assume the same volume of Groin Sealing Removal as New Groin Sealing where applicable.

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

8. *The Contract Duration provides 545 Calendar Days for completion. However, with the restriction of no construction work between May 25 and Sept. 7 in Sea Bright, and March 15 –Sept. 7 for Section 11A in Monmouth Beach, there is insufficient time to perform and complete the construction, even with multiple crews. The Specification requires the contractors to provide proof of the firm’s stone setting experience, and also that of the stone setter. It will be difficult to find multiple people with the required stone setting experience to staff multiple crews. In addition there are very limited sources that can effectively produce the Armor Cap Stone that meets the Specification requirements, and deliver it in sufficient daily quantities, to multiple locations, on a daily basis to allow the schedule and work completion requirements to be met. Therefore, we request that the time duration for completion of work under this contract be increased.*

A. After careful consideration, the Contract Time has been extended to 730 calendar days’ contract duration. The seasonal work timing restrictions, required stone setting qualifications, and stone specification requirements shall remain the same with the additional clarification language included above. The Contractor shall be permitted to submit for an extension of Contract Time as outlined in Section 7:05 – Claim for Delay for such instances as weather delays or other unforeseen circumstances that affect the prosecution of work. Additional considerations for extension of Contract Time may be given due to delays in construction arising from environmental work restrictions as previously outlined within the bid documents.

The Contractor may elect to utilize a sub-Contractor for a portion of the stone-setting work should additional crews be required to complete the work within the prescribed Contract Time. The Contractor may elect to utilize a sub-Contractor for a portion of the stone-setting work should additional crews be required to complete the work within the prescribed Contract Time. The Contractor shall adhere to the specification outlined in Section 19:00 – Subsection 19:03.3 by producing the individual/s credentials for approval as a stone setter prior to the start of work for said stone setter/sub-Contractor.

All inherent risks associated with these requirements shall be accounted for within the bid price for each work item.

9. *We request a further extension of the Bid Date, due to the nature of the work and certain materials required that involve preliminary engineering and design to obtain pricing, from suppliers and subcontractors.*

NJDEP Project #4265-15

Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

- A. The Bid Date for this project shall be extended to Wednesday, September 28, 2016 at 10:00 AM (prevailing time), as outlined in the Cover Letter of this addendum.**

10. There are many details on GPE-3 and S drawings that show an 18" diam steel sleeve for the timber piles. It is clear these sleeves are to be placed in the new stone prior to placing stone to reserve a void to later drive the piles through. Many of these pile locations are in areas where the new stone is placed on top of existing stone seawall, and the details do not show that scenario. The new sleeve will assist getting the pile through the new stone, but the timber pile will stop as soon as it hits existing stone. In these cases where piles are in areas of existing stone does pile capacity or minimum tip not matter, and just stop pile at existing stone? Or should all of those details of supports in locations of existing stone really be changed to some sort of concrete footing?

- A. In areas where the existing sea wall is to remain the Pedestal Pile Support detail shall be utilized.**

11. Paragraph iii on Page D-5 of the Project Description states that all costs for the sorting, handling, and placing of the choke stone shall be incorporated into the unit price for New Core Stone. We assume that this means the choke stone will be measured and paid for payment under the various core stone items, but it will not be measured under its own separate bid item. Please confirm.

- A. Yes. As mentioned on page D-5 and D-6, only small pieces of Core and Mat stone that meet the specifications for Choke Stone shall be incorporated into the seawall as Choke Stone. As such, in preparing bid prices it should be assumed that choke stone is already accounted for in the bid quantities for Core and Mat Stone items. Choke stone will be measured and paid for under the various Core Stone and Mat Stone items, and will not be measured under its own separate bid item.**

12. Spec Section 19:01.3 states that the Department will adjust the compensation to the contractor if the contractor elects to supply stone that is denser than as specified in Table 1. Please explain what method the Department will use to determine the density of the individual stones (boulders) that are to be incorporated into the project.

- A. The stone density will be determined by the stone density certification provided by the supplier, subsequently The Project Manager will periodically determine the average density of several small samples of each stone type using the Water Displacement Method (i.e. by weighing the sample and dividing the weight by**

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Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

the volume of water displaced when placing the sample in a graduated cylinder).

13. *Spec Section 316219 (3.2) states that high-strain dynamic monitoring shall be performed and reported during initial driving and during restriking on 3 percent of piles. Please confirm that the dynamic monitoring will only need to be performed during the initial drive of test piles (not production piles) and that restrikes will only need to be performed on 3 percent of the production piles.*

A. The high-strain dynamic monitoring will only be required during the initial drive of test piles and restrikes will only need to be performed on 3 percent of the production piles.

14. *Please clarify the width of the vehicle crossover ramp east of the seawall on plan sheet 61. The callout states the ramp is to be 16' wide however the detail "typical cross over ramp on rock states the width is 18'-3".*

A. The ramp is to be 16'-0" wide. The detail is to be the same as the detail on sheet 31.

15. *Please clarify if placing of the existing stone stockpile will be measured and paid for upon incorporation into the proposed seawall, or if it considered incidental to one of the bid items*

A. Placing of the existing stone stockpile will be measured and paid for upon incorporation into the proposed seawall.

16. *On Plan Sheet 30, "T-Wall Elevation" shows a 1' Coarse Aggregate Layer. Please clarify if this Coarse Aggregate layer should extend the entire width of the Common Structure Volume area or if it is only required beneath the footing.*

A. The Coarse Aggregate Layer is required under the footing for the "T-Wall" and the "tails".

17. *Section #1 & #9 have a large quantity of splash pad removal and reconstruction. Please provide detail of the existing pad, and new splash pad construction. For example, concrete thickness, rebar, etc..*

A. Section 1 – Based on the 1989 Construction Plans (not As-built), the existing splash pad in Section 1 appears to be comprised of:
-2" Bituminous Concrete Surface Course, Mix I-5,
-6" Bituminous Stabilized Base Course, Mix I-5,
-6" Soil Aggregate Base Course, Mix I-7,
-6" Soil Aggregate Base Course, Mix I-7.

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Sea Bright & Monmouth Beach Seawall Repair & Construction Project

Addendum #2: Clarifications (Q&A) - 9/15/16

Section 9 – No Construction or as-built plans available. Other sections of seawall built around same era show 6" thick concrete with #4 bars, 12" on center both directions.

The information above regarding the construction of the existing splash pad (sections 1 and 9) has not been verified and is provided for information only.

The detail for new splash pad construction at both sections is shown on sheet 73.

18. *Items # 6.7 (A), 8.7 (A), 9.7(A), 10.1 (A), and 14.1 (A) area II "Groin Sealing Removal" items however the plan sheets do not show a limit for the removals. Please clarify the exact limits of removal in order to accurately calculate the lump sum unit price.*

A. See answer to Question #7.

19. *Please clarify if the stringers / joists at the proposed pavilion are to be 2 x 10 or 2 x 12. The structural plans call them out to be J1 Joists, according to the material list on S.101.1 J1 Joists are to be 2 x 12. On the architectural plans A.202 and A.204 show the stringers as 2 x 10.*

A. The joists are to be 2 x 12 as on the Structural Drawing (S.101).

20. *The Structural Drawings and Architectural Drawings show different requirements for the cross bracing at timber piles. On plan sheet A.202 cross bracing is shown in the "Ramp 1 - Part Framing Plan" section at all four pile locations. On structural drawing S.101 no cross bracing is shown at these locations. Please revise and clarify which detail is correct.*

A. Detail "2/A.202" on page Sheet A.202 matches Detail "6/S.200" on sheet S.200 that referenced on Sheet S.101.

21. *On Plan Sheet 31, "Reinforcement on Rock" detail, there are dowels shown coming out of the concrete slab into the seawall. Please clarify what spacing these dowels will be required at and the bar size required.*

A. The Dowels shall be 5-#5 bars equally spaced at 2'-0" on center along the length of the seawall with a minimum embedment of 8".

22. *Structural Note 2 found on sheets 30 and 61 of the contract plans states "All areas of embedded tails shall be grouted with Class "B" concrete". Is it the intention of this note to require the backfill material between the T-Wall stems (tails) be Class "B" concrete? The only other reference on the plans to*

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Addendum #2: Clarifications (Q&A) - 9/15/16

the required backfill between the stems (tails) is Note 2 in the Typical T-Wall Section located on sheet 31, which refers us to the NJDOT Standard Specifications for permissible backfill. Likewise, the only reference in the contract technical specifications is to the NJDOT Standard Specifications. Please clarify the intention of the referenced Structural Note 2 and confirm the backfill requirements for the area within the T-Wall stems.

A. Reference shall be made to Note 3 on Sheets 30 and 61. Sheets 31 and 62 clarify the placement of the seawall stonework and grouting. Reference is made to T-Wall/Sea Wall Tie-In Plan. The remaining backfill shall be placed in accordance with NJDOT standards as per T-Wall Typical Section.

23. How many bird monitors should the firm expect to use at one time?

A. For the purposes of bidding, the firms should expect to use one monitor should it be necessary due to the results of the bird survey.

24. Can the bird monitors get permission to allow the use of an ATV?

A. Yes, permission can be obtained to use an ATV in an approved manner.

ACKNOWLEDGMENT OF RECEIPT OF CHANGES TO BID DOCUMENT FORM

New Jersey Department of Environmental Protection

(Name of Local Contracting Unit)

Sea Bright & Monmouth Beach Seawall Repair
& Construction Project

(Name of Construction/Public Works Project)

4265-15

(Project or Bid Number)

Pursuant to Section 3:05 – Addendum, the undersigned bidder hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the local unit's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

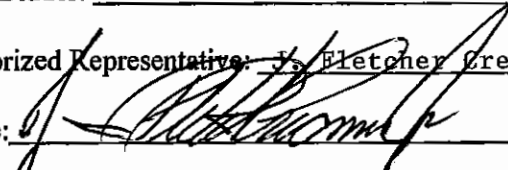
Local Unit Reference Number Or Title of Addendum/Revision	How Received (mail, fax, Pick-up, etc.)	Date Received
<u>#1</u>	<u>Mail</u>	<u>8/31/16</u>
<u>#2</u>	<u>Mail</u>	<u>9/15/16</u>
<u>CLARIFICATION # 1</u>	<u>MAIL</u>	<u>9/21/16</u>

NO ADDENDA WAS RECEIVED

Acknowledgement by Bidder:

Name of Bidder: J. Fletcher Creamer & Son, Inc.

By Authorized Representative: J. Fletcher Creamer, Jr.

Signature: 

Printed Name and Title: J. Fletcher Creamer, Jr.
Chief Executive Officer

Date: 9/21/16

PREVAILING WAGE SCHEDULES FOR THIS PROJECT ARE NOT REPRINTED
HERE DUE TO SIZE

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF COASTAL ENGINEERING
CODE OF ETHICS FOR VENDORS

Introduction

The New Jersey Department of Environmental Protection Division of Coastal Engineering (NJDEP-DCE) considers the maintenance of public trust and confidence essential to its proper functioning, and accordingly has adopted this vendors' Code of Ethics. Vendors who do business with the NJDEP-DCE must avoid all situations where proprietary or financial interests or the opportunity for financial gain could lead to favored treatment for any organization or individual. Vendors must also avoid circumstances and conduct which may not constitute actual wrongdoing, or a conflict of interest, but might nevertheless appear questionable to the general public thus compromising the integrity of the NJDEP-DCE.

This code, originally adopted on December 16, 1987, is based upon the principles established in Executive Order 189 and laws governing the Executive Commission on Ethical Standards, N.J.S.A 52:13D-12 et seq., which, while not strictly applicable to contractors, provides general guidance in this area. Also, this code has been established pursuant to the authority embodied in N.J.S.A. 27:1A et seq., and for good cause.

This Code of Ethics shall be attached to every contract and agreement to which the NJDEP-DCE is a party. It shall be distributed to all parties who presently do business with the NJDEP-DCE and, to the extent feasible, to all those parties anticipating doing business with the NJDEP-DCE.

NJDEP Code of Ethics for Vendors

1. No vendor* shall employ and NJDEP officer or employee in the business of the vendor or professional activity in which the vendor is involved with the Department officer or employee.
2. No vendor shall offer or provide any interest, financial or otherwise, direct or indirect, in the business of the vendor or professional activity in which the vendor is involved with the Department officer or employee.
3. No vendor shall cause or influence, or attempt to cause or influence any NJDEP officer or employee in his or her official capacity in any manner which might tend to impair the objectivity or independence of judgment of that NJDEP officer or employee.
4. No vendor shall cause or influence, or attempt to cause or influence any NJDEP officer or employee to use or attempt to use his or her official position to secure any unwarranted privileges or advantages for that vendor or for any other person.
5. No vendor shall offer any NJDEP officer or employee any gift, favor, service or other thing of value under circumstances from which it might be reasonably inferred that such gift, service or

other thing of value was given or offered for the purpose of influencing the recipient in the discharge of his or her official duties. In addition, officers or employees of the NJDEP will not be permitted to accept breakfasts, lunches, dinners, alcoholic beverages, tickets to entertainment and/or sporting events or any other item, which could be construed as having more than nominal value.

Note: This section would permit an NJDEP officer or employee to accept food or refreshments of relatively low monetary value provided during the course of a meeting, conference or other occasion where the employee is properly in attendance (for example – coffee, danish, tea or soda served during a conference break).

Acceptance of unsolicited advertising or promotional material of nominal value (such as inexpensive pens, pencils, or calendars) would also be permitted.

Any questions as to what is or is not acceptable or what constitutes proper conduct for a Department officer or employee should be referred to the Department's Ethics Liaison Officer or his or her designee.

6. This code is intended to augment, not to replace, existing administrative order and the current Department Code of Ethics.

***Vendor** is defined as any general contractor, subcontractor, consultant, person, firm, corporation or organization engaging in or seeking to do business with the NJDEP.

Chris Christie
Governor

Kim Guadagno
Lt. Governor

Bob Martin
Commissioner



April 2014, revised September 2016